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THE INFLUENCE OF THE WEATHER ON
FIELD TRACTABILITY IN ALBERTA

by
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A THESIS

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "The Influence of the Weather on Field Tractability in Alberta" submitted by Patrick Lorne Rutledge in partial fulfilment of the requirements for the degree of Master of Science.

ABSTRACT

The objective of this thesis was to examine the weather on a daily basis, with a view to establishing the number of work days available for a particular farm operation. Although the weather may influence the operation of farm machinery in several ways, this project has been limited to consideration of soil moisture, and hence soil tractability as it is influenced by the weather.

A technique developed by W. Baier and G.W. Robertson was used to estimate soil moisture, using daily minimum and maximum temperature, and precipitation, obtained on IBM punched cards from the Meteorological Branch, Department of Transport in Toronto. In addition solar radiation at the top of the atmosphere, as well as monthly averages of dew point, wind mileage per day, hours of sunshine per day, and day length were used.

The necessity of including the above mentioned variables restricted the Alberta stations to Medicine Hat, Lethbridge, Calgary, Edmonton, Vermilion, Beaverlodge, and Fairview. At some stations as many as forty-five years were considered adding up to a total of 102,000 station days.

In order to facilitate computer handling the climatological cards were transferred onto magnetic tape, a task which involved some computer instabilities. Once on tape the data were checked for mispunched data, as well as for completeness of data, and a complete record was produced.

Criteria based on traction were developed for classifying a day as a good day (work day), or a bad day (non-work day). Using these criteria, and the amassed weather data, the probability of a bad day as well as the probability of a good day, were determined on a monthly basis for the seven Alberta stations.

It was discovered that "persistence" of work days or non-work days does occur. This means that the probability of a work day for example is greater if the previous day was a work day than if the previous day was a non-work day. Hence the probability of a day being a work day can not be established objectively, without some knowledge of conditions existing on the previous day.

Although the probabilities determined in this project may, or may not be entirely reliable for all combinations of soil and topography, they do help to quantify variables that are of great significance in today's scientific business of farming. Improvements in the estimated probabilities for tillage operations as well as the establishment of probability values for harvesting operations will further improve the data available to the farmer as a guide to correct machinery sizing.

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1. INTRODUCTION AND OBJECTIVES

The operation of farm machinery is a task subject to the whims of nature, and optimum machinery sizing requires some consideration of weather variability. Before attempting to compensate for the weather, however, first consider the manner in which the weather may halt machinery operations. Tillage operations are in general, stopped when the soil becomes too wet to provide sufficient traction for mobility, or in some cases, when the soil becomes wet enough to stick to the implement. Harvest operations may be stopped in an additional manner, in that the soil conditions may be satisfactory, while the crop may be too wet to harvest. For purposes of this thesis, only the possibility dealing with traction has been considered.

The objective of this thesis was to examine the weather, on a daily basis, with a view to establishing the number of working days available for tillage operations. The general problem may be divided into several sub-problems. The first problem was that of establishing the net moisture content of the soil, that is precipitation minus evapotranspiration, on a daily basis. Having established the moisture content of the soil, it was then necessary to determine the relationship between soil moisture, and soil tractability, in order to classify a particular day as either a work day, or a non-work day. When this relationship was satisfactorily established, it was then possible to determine the number of work days

available, for a particular tillage operation. The ultimate goal of this project was to establish some meaningful probability values, on a monthly basis, for representative areas of the province of Alberta.

2. LITERATURE REVIEW

The amount of available literature, dealing with the general problem of relating climatological data to field tillability, varies depending upon the particular aspect of the problem concerned. Literature dealing with evaporation and soil moisture content is relatively abundant, while literature pertaining to the relationship between soil moisture, and soil tractability, or implement draft requirements is relatively scarce.

2.1 Evapotranspiration and Soil Moisture

Earlier work dealing with evaporation was concerned with water loss from open water surfaces. ¹⁵Chow reported that, "Under given conditions, evaporation is proportional to the deficit in vapor pressure, which is the difference between the pressure of saturated vapor at the temperature of the water and the aqueous vapor pressure of the air."

Whether over open water, or over soil, evaporation is related to the energy balance at the earth's surface.

¹⁹Halstead and Covey note that this balance depends upon four factors: the radiation received, the heat flux to the soil by conduction, the heat flux to the air by convection, and the heat of vaporization of water. The apportioning of net radiation into the remaining components depends upon:

- (1) the temperature distribution in the soil and in the air and the water vapor distribution in the air.

- (2) the availability of water for transpiration and evaporation.
- (3) the thermal properties of the soil.
- (4) and on the rate of movement and mixing of air in and over the plant cover.

Energy relationships, and soil moisture retention, involve the concept of capillary potential, which is the amount of work required to pull a unit mass of water from a unit mass of soil. This idea is explained with the use of calculus by Chow¹⁵, Baver⁸, and Richards³⁵. Richards³⁶ et al. simplified this theory, and expressed soil moisture content as a function of time after irrigation.

Because of the complexity of the energy balance approach, simpler means of estimating evaporation were sought.

Thornthwaite⁴² (1948) pioneered this line of thought by estimating evaporation from water surfaces, using the mean monthly temperature, and a heat index which varied from station to station. Penman³¹ (1948) developed a more sophisticated means of estimating evaporation using wind velocity, vapor pressure, solar energy, and temperature. This method is more accurate than Thornthwaite's.

The closeness of the relationship, between evapotranspiration and solar radiation, and the necessity of including radiation in estimates of evaporation was discussed by Pruitt and Van Wijk⁴⁴. Pelton³⁰ reported that between 70 and 80% of the evaporation from Bellani plates,

Class A weather pans, and the experimental farm's buried tank at Swift Current, could be explained by air temperature, radiation, wind, and vapor pressure. At Summerland, B.C., Wilcox⁴⁵ found a high correlation between evapotranspiration from: alfalfa, ladino clover, and brome grass and solar radiation, temperature, wind, and humidity. In Southern Alberta, Hobbs and Krogman²⁰ correlated evapotranspiration estimates by Thornthwaite and Penman with evapotranspiration from second year alfalfa. Hobbs and Krogman²¹ also related evapotranspiration from alfalfa to meteorological variables. Thus the soundness of using climatological factors to estimate evaporation, and potential evapotranspiration, has been well established.

Lignon et al.²⁵ used Thornthwaite's method of estimating potential evapotranspiration, which they combined with precipitation to determine soil moisture. To improve their estimates they added corrections for soil dryness and for the influence of the weather on evapotranspiration. A similar method was used by Pierce³², who used mean monthly temperature, with corrections for soil dryness, crop stage, rainy days, as well as day length.

Baier and Robertson⁵ used maximum temperature, temperature range, solar radiation at the top of the atmosphere, hours of sunshine, day length, wind mileage, and vapor pressure to estimate the daily latent evaporation from Bellani plates. They obtained a correlation coefficient

of 0.84. Holmes and Robertson²², Krogman and Hobbs,²⁴ and
Baier³ converted latent evaporation to potential evap-
otranspiration by multiplying latent evaporation by 0.0034.
Using potential evapotranspiration and precipitation, with
corrections for crop stage and soil dryness, Baier and
Robertson⁴ estimated soil moisture under wheat for various
soil depths. Baier and Robertson⁶ found a high correlation
between estimated soil moisture and crop yields for
several points throughout Canada.

The idea of estimating soil moisture using a regression
of climatological variables is seen to be well supported.
Because Baier and Robertson's technique appeared to be the
most refined it was used here.

2.2 Soil Moisture and Soil Tractability

The specific problem of relating soil tractability to
soil moisture, with special regard to farm machinery, does
not appear to have been examined. The problem of tractability,
and soil bearing capacity under weak soils has been examined
in connection with the design of earth crossing vehicles
by Bekker^{9, 10} and by the U.S. Army⁴³. The general problem
of soil strength and soil tractability has been examined
by several writers (Bekker^{9, 10}, Janosi²³, Wills⁴⁶, Barger
et al.⁷, Reece³⁴). These writers expressed sinkage, rolling
resistance, and soil thrust in terms of the following soil
variables: cohesion of soil (c); internal frictional angle

of soil (ϕ), cohesion modulus of soil deformation (K_c), frictional modulus of soil deformation ($K\phi$), and the coefficient of sinkage (n). These soil variables, must be determined experimentally, for soils of varying texture, and moisture contents before the relationships described by these writers can be used in relating soil moisture to soil tractability.

The shear strength of a soil is given by Coulomb's equation, $S = c + p \tan \phi$, where p is the confining pressure and c and ϕ are as defined above. The angle of internal friction in top soils was found by Fountaine and Brown¹⁷ to be quite high under small normal loads ($p=10$ psi).

¹⁶ Evans indicates that the shear strength of dry top soils depends upon their compaction. However, if the moisture content is well above the plastic limit, compaction reduces the voids causing the soils to become saturated. In this case compaction does not increase soil strength. He found that agricultural loams, with a clay content above 20%, and a moisture content in the plastic range, appear to have no angle of shear resistance. Sandy soils however, have a high angle of shear resistance, and no cohesive strength. Skempton and Bishop³⁷ indicate that both cohesion and internal friction depend upon the void ratio of the soil at the instant of failure. Hence, the determination of soil tractability is seen to be quite complicated.

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Nichols²⁹ experimented with four clays, a clay loam, and a silt loam, and established a relationship between clay content, liquid limit, moisture content, confining pressure, and shear strength of plastic soils. Since the values required using this technique were available for a number of soils in the province, this was the technique used to estimate soil shear strength in this study.

In addition to knowing the shear strength of the soil, an estimate of the shear strength necessary to provide traction was also required. This is determined by the draft required to pull a tillage implement, the rolling resistance of the tractor, and the contact area of the tires with the soil. No literature was found relating any of these factors to soil moisture content. However, rolling resistance has been related to outside tire diameter^{7, 23}. Draft requirements for various implements under general⁷ conditions are given by Barger et al.¹ and in A.M.A. test reports¹.

While information dealing with specific topics was in some instances not precise, some information at least was found dealing with the topic of soil tractability in general.

3. SOIL MOISTURE

Net soil moisture change depends upon two quantities: precipitation and evapotranspiration. This moisture change was estimated using a technique developed by Baier and Robertson⁴. A resume of their technique supplemented by private communications as applied to Alberta conditions is in order.

3.1 The Versatile Soil Moisture Budget

In the Versatile Soil Moisture Budget, the soil was divided into six soil moisture zones, holding 0.20 in., 0.30 in., 0.50 in., 1.0 in., 1.0 in., and 1.0 in. of water, respectively. These zones were based on a fixed depth of water held in the soil, rather than on a fixed depth of soil, in an attempt to make the budget independent of soil type. Hence, the thickness of the soil layer concerned, depended upon its moisture holding capacity.

The addition of moisture to the soil was for the most part equal to the precipitation. An exception to this general case was a twenty-four hour rainfall in excess of one inch. In this case it was assumed that some run off occurred. If run off did occur, it was equal to precipitation minus infiltration where infiltration (I) is,

$$I = 0.9177 + 1.811 \log_e (\text{rainfall}) + 0.0097 \log_e \frac{S_j(i-1)}{S_j} \cdot 100, \text{ where } S_j \text{ is the capacity of zone } l \text{ and } S_j(i-1) \text{ is the available moisture at the end of the day preceding the rainfall.}$$

On rainy days, evaporation was assumed to have occurred in the morning, while precipitation was assumed to have occurred in the afternoon. If the rainfall was associated with a low pressure centre, or due to orographic lifting as a result of a high pressure centre, this assumption may be invalid, but as is the usual case in Alberta, if the rainfall was of a showery nature the assumption is reasonable.

In the estimate of evapotranspiration, allowance was made for stage of crop development. This was accomplished by the use of the coefficients given in Table 1.

The coefficients for the period from planting to the hard dough stage were the best available for estimating soil moisture under wheat. Because of a desire to extend the budget beyond this range, the coefficients for the period from April 1 to planting, and the period from hard dough to October 31, were estimated by the author. The coefficients for the period from April 1 to planting were assumed to be the same as from planting to emergence, whereas the coefficients from hard dough to October 31, were assumed to be between those for the period planting to emergence, and the period, soft dough stage to hard dough stage. The latter coefficients can no doubt be improved. The development of similar coefficients, describing the uptake of water by other crops, as well as the loss of water by a summer-fallow field, would also improve the usefulness of the

technique, but for present purposes, only moisture conditions under wheat could be considered.

Table 1. Coefficients Describing Uptake of Water by Wheat

	<u>Zone 1</u>	<u>Zone 2</u>	<u>Zone 3</u>	<u>Zone 4</u>	<u>Zone 5</u>	<u>Zone 6</u>
P-E	.60	.15	.05	.00	.00	.00
E-J	.55	.25	.05	.00	.00	.00
J-H	.40	.25	.10	.10	.05	.00
H-F	.45	.25	.10	.10	.10	.10
F-Mi	.45	.25	.10	.10	.10	.10
Mi-SD	.45	.25	.10	.10	.05	.05
SD-HD	.45	.25	.10	.10	.00	.00
Hd-FU	.55	.20	.05	.00	.00	.00

P = planting, E = emergence, J = jointing, H = heading,
F = flowering, Mi = milk, SD = soft dough, HD = hard dough,
FU = freeze up.*

In addition to the above characteristics, it was necessary to make an allowance for the effect of soil dryness, on the relationship between potential evapotranspiration, and actual evapotranspiration. The nature of this effect may vary under different environmental conditions. Figure 1 indicates various AE/PE relationships as proposed by Baier and Robertson⁴. One or more of the proposed AE/PE relationships could have been incorporated into the program for estimating soil moisture by including the required coefficients in the form of ten by ten matrices. Tables 2 and 3 include the

* Coefficients for planting to hard dough were obtained in personal communication with G. W. Robertson.

coefficients describing curves D and E. Curve E shows the type of relationship applicable to wheat grown in Mathilda loam at Ottawa. The use of curve D after harvest at Ottawa reduced the discrepancies between observed and estimated soil moisture for the 0.20 inch zone, having no basis for doing otherwise, curve E was used before harvest, while curve D was used after harvest. Perhaps different soils, in different areas of the province require somewhat different tables of coefficients, but because there is no experimental work for the province the curves used by Baier and Robertson were used here.

Figure 1. Potential Evapotranspiration vs Actual Evapotranspiration

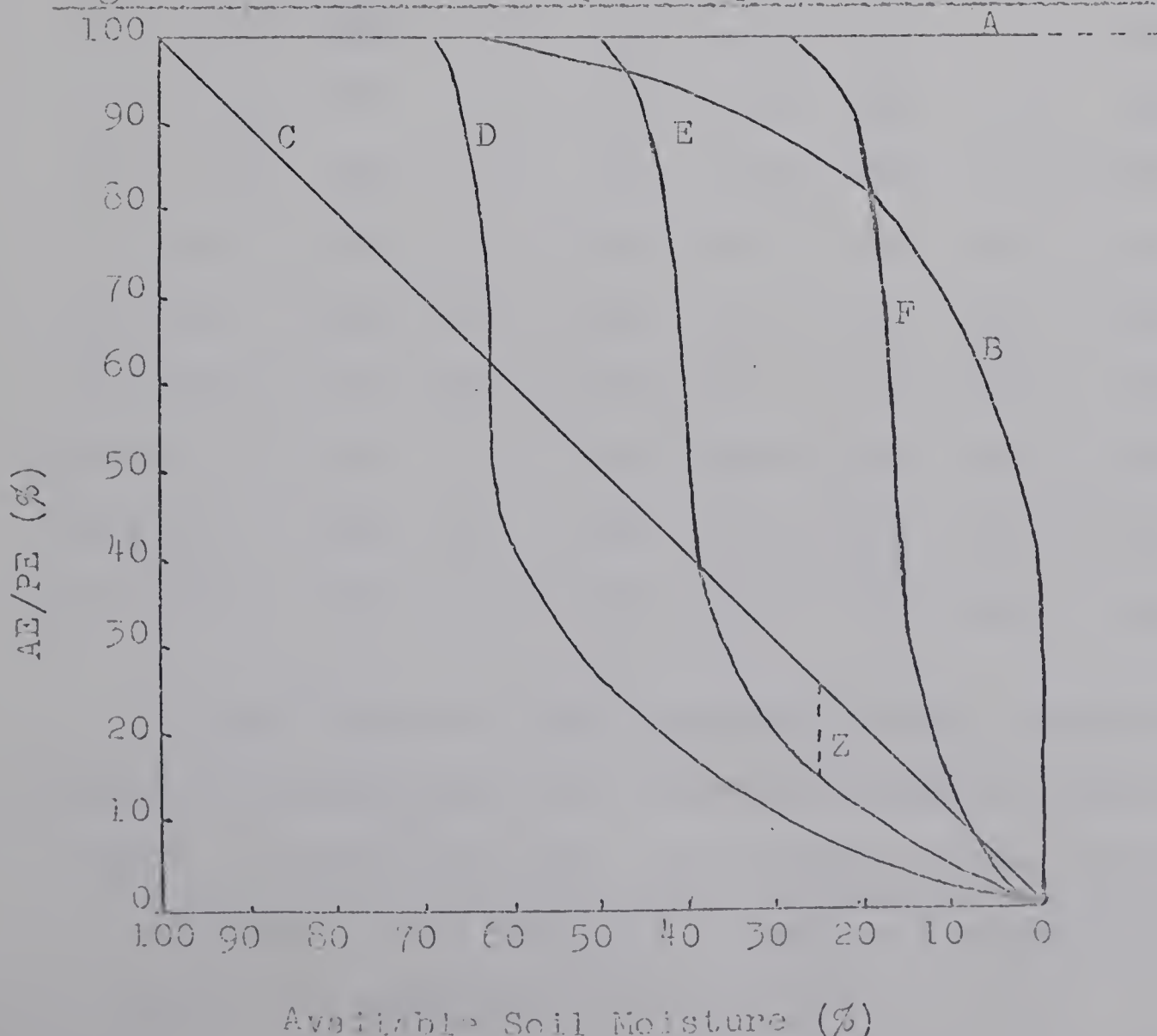


Table 2.* Adjustment Factors (Z) for Soil Dryness Curve D

.00	.00	.00	.00	.20	.16	.14	.13	.11	.10
.09	.16	.15	.14	.13	.13	.12	.17	.16	.15
.14	.18	.17	.21	.20	.19	.22	.21	.24	.23
.26	.25	.27	.29	.29	.30	.32	.34	.36	.35
.36	.37	.37	.39	.40	.41	.43	.46	.47	.47
.49	.50	.54	.56	.56	.59	.61	.64	.66	.68
.70	.76	.79	.83	.85	.91	1.00	1.03	1.16	1.41
1.40	1.38	1.35	1.34	1.33	1.31	1.29	1.28	1.26	1.25
1.23	1.21	1.19	1.18	1.17	1.15	1.14	1.13	1.12	1.11
1.10	1.08	1.07	1.06	1.05	1.04	1.03	1.02	1.01	1.00

Table 3.* Adjustment Factors (Z) for Soil Dryness Curve E

.02	.04	.06	.08	.10	.12	.14	.16	.18	.20
.21	.23	.25	.27	.29	.31	.32	.34	.36	.38
.40	.42	.44	.46	.48	.50	.52	.54	.56	.60
.65	.65	.70	.71	.74	.78	.81	.91	1.05	1.25
1.34	1.43	1.63	1.82	2.00	2.00	2.00	2.00	2.00	2.00
1.96	1.92	1.89	1.85	1.82	1.79	1.75	1.72	1.69	1.67
1.64	1.61	1.59	1.56	1.54	1.52	1.49	1.47	1.45	1.43
1.41	1.39	1.37	1.35	1.33	1.32	1.30	1.28	1.27	1.25
1.23	1.22	1.20	1.19	1.18	1.16	1.15	1.14	1.12	1.11
1.10	1.09	1.08	1.06	1.05	1.04	1.03	1.02	1.01	1.00

In the Versatile Soil Moisture Budget, water was withdrawn simultaneously from different depths of the soil profile in the root zone in relation to the potential

* Coefficients were obtained in personal communication

evapotranspiration rate and the available soil moisture in each zone. The actual daily evapotranspiration was estimated from the following equation:

$$AE_i = \sum_{j=1}^n k_j \cdot \frac{S'_j(i-1)}{S_j} \cdot Z_j \cdot PE_i \cdot e^{-\psi(PE_i - \bar{PE})}$$

where

AE_i = actual evapotranspiration for day i

$\sum_{j=1}^n$ = summation carried out from zone $j = 1$ to zone $j = n$

k_j = coefficient for soil and plant characteristics in zone j

$S'_j(i-1)$ = available soil moisture in the j th zone at the end of day $i-1$

S_j = capacity for available water in the j th zone

Z_j = adjustment factor for different types of soil dryness curves

PE = potential evapotranspiration for day i

ψ = adjustment factor accounting for effects of varying PE rates on AE/PE ratio

$\bar{PE}$ = average monthly PE

Potential evapotranspiration has been estimated by several workers ^{3, 22, 24} as being equal to the latent evaporation (LE) times 0.0034. Latent evaporation is either measured with a Bellani plate atmometer, or it may be estimated from weather parameters, as was the case here. The technique used in estimating latent evaporation is discussed in section 3.2

The term $e^{-w}(PE_i - \overline{PE})$ accounts for varying atmospheric demand rates (PE_i) on the relative evapotranspiration, as compared to the long term average PE for the month ($\overline{PE}$), under different soil moisture stresses (w). Soil moisture stress is dependent upon the available soil moisture in a particular zone, and is expressed as a percent of the available water holding capacity of that zone. A regression equation ($r = 0.866$) used for estimating w , has been developed by Baier and Robertson⁴, as follows:

$$w = 7.81 - 0.11 \cdot \frac{S'_j(1 - 1)}{S_j} \cdot 100.$$

The soil Moisture Budget required some initial conditions and controls, whether they be observed or estimated. In this case they had to be estimated.

Monthly average potential evapotranspiration rates were required for the months of concern for each station considered. These rates were determined by the technique discussed in section 3.2 and are found in Table 4.

An estimate of soil moisture at the beginning of each season was also required. The assumption made was that the moisture content of each zone was at one half capacity at the beginning of the first season for each station. The moisture content at the beginning of each successive season was estimated by adding a fraction of the winter precipitation to the fall moisture content. The fraction of winter precipitation that is absorbed by the soil varies with latitude. Staple and Lehane⁴¹ of Swift Current, found that

between November and April, between 1940 - 1950, 33% of the precipitation was conserved. Dr. Carder¹⁴ at Beaverlodge found that from harvest to freeze up 13% of the precipitation was conserved whereas from freeze up till spring break up 5% was conserved. For purposes of this study, it was assumed that for stations (the choice of stations is discussed in section 3.5) Medicine Hat, Lethbridge, and Calgary, 35% of the winter precipitation was conserved, at Edmonton and Vermilion 25% was conserved, and at Beaverlodge and Fairview 10% was conserved. The amount of precipitation conserved in the southern part of the province may be far less than at Swift Current because of the influence of Chinooks, but no information was found for Southern Alberta stations.

Crop stage dates were also required. Upon examination of stage dates (Baier and Robertson⁶) for Beaverlodge, Lacombe, and Swift Current, there appeared to be little difference in stage dates from one station to another, until the soft dough stage, after which a difference of two weeks was found. As a matter of convenience stage dates were assumed to be constant throughout the province and they were: emergence May 20, jointing June 17, heading July 14, flowering July 19, milk August 2, soft dough August 10, and hard dough September 7.

The usefulness of the program would be increased markedly if provision were made for variation in planting

dates, and consequent later stage dates. The stage dates following planting are dependent upon a number of factors, including precipitation and hours of sunshine. Because these dates are not easily determined average dates had to be assumed for these stages. If allowance could be made for these variations the program would obviously be of much greater benefit.

3.2 Estimation of Latent Evaporation

The Soil Moisture Budget required an estimate of latent evaporation, which was determined separately by Baier and Robertson⁵. Using three parameters, minimum and maximum temperature, and solar radiation at the top of the atmosphere, they found a correlation coefficient of 0.68. By including additional factors of sunshine hours, day length, dew point, and wind mileage, the correlation coefficient was raised to 0.84. In other words, 70% of the variation was explained by variation in the above factors.

Either daily observations or long term monthly averages of wind mileage, hours of sunshine, dew point, and day length could have been used. Although not as accurate as daily observations, monthly averages to help make allowance for station weather differences. Latent evaporation was estimated from the following equation,

$$EL = -53.39 + 0.337MAX + 0.531 (MAX - MIN) + 0.0107Q_o \\ 0.0512Q_s + 0.0977 WIND + 1.77 (e_w - e_s)$$

where

EL = latent evaporation

MAX = maximum Fahrenheit temperature

MIN = minimum Fahrenheit temperature

Q₀ = solar radiation at the top of the atmosphere

Q_s = solar radiation received on a horizontal surface

WIND = total daily wind mileage

e_w = saturation vapor pressure at mean air temperature

e_s = saturation vapor pressure at mean dew point

The term EL indicates evaporation from a Bellani plate atmometer. It is measured in cc. per day and in this case was an estimated value.

Minimum and maximum temperature were both recorded in a Stevenson's screen four feet above ground level. These values were obtained from Type 4 Climatological cards, which were obtained from the Meteorological Branch, Department of Transport, in Toronto.

The entity Q₀ is the solar radiation at the top of the atmosphere. Values of Q₀ were obtained on IBM cards, one card per day for each degree of latitude, from the Plant Research Institute, Ottawa. They are also available in Smithsonian Tables³⁸.

The term Q_s is the solar radiation received at the earth. It was derived from a separate regression equation, with a coefficient of determination of 0.85. The equation also developed at Ottawa is as follows:

$$Q_s = Q_0(0.251 + 0.616(n/N))$$

where n is the daily hours of bright sunshine and N is the number of hours between sunrise and sunset. The value n was taken as a monthly average (the reason being explained in section 3.3) and a summary of n , for each month at each station, is found in Table 5. In this case a monthly average was used. The monthly averages were obtained from Smithsonian tables and are summarized in Table 6.

Wind mileage was also a monthly average. The anemometer at Medicine Hat was located 57 ft. above ground, at Lethbridge 85 ft. (changed to 10 m. November, 1965), at Calgary 57 ft., at Edmonton 67 ft., at Vermilion 38 ft., at Beaverlodge 35 ft., and at Fairview 38 ft. above ground. Because of the difference in anemometer heights, a wind reduction formula was used to bring wind mileage to a common height. The formula is:

$$U_6 = U_x \cdot \frac{\log h_6}{\log h_x}$$

where U_x = wind at height h_x

U_6 = wind at 6 feet

This formula was suggested by Baier and Robertson (private communication). Summaries of the wind mileage for the different stations used are given in Table 7.

Saturation vapor pressures were obtained from tables ³⁸. The dew point was again a monthly average. The dew point for each station is given in Table 8.

3.3 Programing

The determination of latent evaporation, and subsequently soil moisture is a lengthy process, however computations are greatly facilitated by the use of a digital computer. At the time this project was started computer programs written in Fortran II were obtained from the Plant Research Station in Ottawa to compute both latent evaporation and soil moisture. Programs are now available in Fortran IV from Ottawa.

The program for estimating daily latent evaporation would accept either daily observations or monthly averages of wind mileage, dew point, hours of sunshine, and day length. In addition, daily observations of temperature and precipitation were required as input. The output from this program either in the form of punched cards or on magnetic tape contained the date, estimated latent evaporation, and precipitation. This information then provided the input for the soil moisture program. Both of these programs were much more versatile than was required, and since both had to be rewritten in Fortran IV, the two programs were greatly simplified and combined into one program.

Since monthly averages were used for all the weather parameters except temperature and precipitation, the combined program has provisions for accepting daily observations of temperature and precipitation only. Hence the versatility of the programs was reduced, but soil moisture was calculated

from the basic weather parameters without the intermediate step of obtaining evaporation output and feeding it into a soil moisture program.

The soil moisture content was used to determine whether tillage operations were possible or not. A good day was represented by an X and a bad day was represented by a dot (.), with one line of X's and dots representing a time interval of one month. Hence, the combined program accepts as input Type 4 Climatological cards, and summarizes the output in the form of one line per month, indicating field workability. If more versatility in the soil moisture program is required the revised programs from Ottawa must be referred to.

3.4 Selecting and Obtaining Data

The techniques developed by Baier and Robertson required daily observations of minimum and maximum temperature, and precipitation. Also required were: observations of wind mileage, hours of sunshine, and dew point, either daily, or as monthly averages. Hence the problem determining the data required was solved.

Upon contacting the Meteorological Branch, Department of Transport, Toronto it was learned that the required information was available on IBM punched cards. However, the desired daily data were not all readily available on single cards. Instead, minimum and maximum temperature, and

precipitation, were available on one card; wind mileage was available on a second card; hours of sunshine was available on a third card; and dew point was available on yet another card. Wind velocity and dew point data were punched on an hourly basis, and while cards could have been obtained for selected hours, the cost would have been as great or greater than if the cards for all twenty-four hours were taken. Irrespective of cost, if fifty cards per day (the number required to obtain all the required information) had been obtained for a number of years at a number of stations, the volume of cards required would have been astronomical. Another costly alternative would have been to have obtained a composite card containing all the desired information. Not only would this have been costly, but a waiting period of from five to six months would have been required. It would also have been possible to have obtained the data on tape.

Partly because of cost considerations, and partly because the moisture budgeting technique of Baier and Robertson would accept monthly averages, only the cards containing minimum and maximum temperature, and precipitation (Type 4 Climatological Cards) were obtained. These cards were available at a cost of six dollars per thousand cards. The remaining data were obtained from monthly summaries.

The monthly averages of wind mileage, hours of sunshine, dew point, and potential evapotranspiration summarized

in Tables 4 - 8, were based on a ten year period 1957 - 1966, for the months April to October. For the remaining months, the values for 1966 were used simply to provide a value in order to make the program work, since evaporation was of little interest during these months.

3.5 The Selection of Stations

The choice of stations from which to obtain weather data was based primarily upon the number of weather parameters recorded at individual stations. Since observations, or monthly averages of, minimum and maximum temperature, precipitation, wind mileage, hours of sunshine, and dew point were required for estimations of evaporation, and subsequently soil moisture content, the stations had to be chosen from the stations that recorded all these parameters. Medicine Hat, Lethbridge, Calgary, Edmonton, and Fairview were the only stations in the province that recorded all the required parameters for a sufficiently long period of time. Beaverlodge recorded all the parameters excepting dew point. Since Grande Prairie recorded dew point and was located only thirty miles from Beaverlodge, it was felt that the dew point at Grande Prairie would be a sufficiently close estimate of dew point at Beaverlodge. Vermilion did not record hours of sunshine, but Ranfurly did, and again it was felt that conditions at Vermilion would be sufficiently close to conditions at Ranfurly, to permit the

Table 4. Monthly Average Potential Evapotranspiration

<u>Station</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
Med.Hat	.00	.00	.03	.09	.16	.17	.22	.19	.11	.06	.01	.00
Lethbridge	.00	.01	.04	.10	.15	.17	.22	.18	.12	.07	.02	.01
Calgary	.00	.00	.02	.07	.14	.15	.18	.14	.09	.05	.01	.00
Edmonton	.00	.00	.01	.07	.14	.15	.16	.12	.07	.03	.00	.00
Verm.	.00	.00	.01	.08	.14	.15	.16	.12	.08	.04	.00	.00
Beaver.	.00	.00	.01	.05	.13	.15	.15	.11	.06	.02	.00	.00
Fair.	.00	.00	.01	.04	.13	.14	.14	.11	.05	.02	.00	.00

Table 5. Monthly Average Hours of Daily Sunshine

	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
Med.Hav	2.5	4.0	5.8	6.6	8.4	9.0	11.3	9.4	6.2	5.4	3.4	2.7
Leth.	2.4	5.1	6.2	6.9	8.5	9.1	11.3	9.7	7.2	5.8	4.1	2.2
Calgary	2.2	3.9	6.1	6.4	8.1	8.5	10.8	8.9	6.2	5.4	3.3	2.5
Edmonton	2.2	4.3	5.8	7.7	8.8	9.2	10.4	8.4	6.3	5.2	2.6	2.7
V m.	2.6	4.7	5.9	7.6	8.5	8.7	9.9	7.9	6.0	5.1	2.7	2.2
Fair.	2.3	4.0	5.6	7.6	8.9	8.5	9.2	8.2	5.5	4.4	2.4	1.2
Beaver.	1.6	3.5	6.0	7.1	8.5	9.4	9.9	8.4	5.6	4.3	1.9	1.4

125.

Table 6. Monthly Average Day Length (hours)

Lat.50	8.6	10.2	11.8	13.8	15.4	16.3	15.9	14.5	12.6	10.8	9.1	8.2
Lat.51	8.5	10.1	11.8	13.8	15.5	16.4	16.1	14.6	12.7	10.8	9.0	8.0
Lat.53	8.2	9.9	11.8	14.0	15.9	16.8	16.4	14.8	12.7	10.6	8.7	7.7
Lat.55	7.7	9.6	11.8	14.2	16.3	17.5	17.0	15.1	12.8	10.5	8.3	7.1
Lat.56	7.8	9.7	11.8	14.1	16.1	17.3	16.8	15.0	12.8	10.6	8.4	7.3

Table 7 Monthly Average Daily Wind Mileage (at six feet)

	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
Med. Hat	82.9	98.9	129.7	126.5	118.0	108.4	95.7	97.8	109.5	114.8	107.4	103.1
Leth.	131.7	147.7	168.7	148.9	140.2	132.7	117.4	123.4	127.2	162.0	151.4	168.7
Calgary	107.1	101.8	118.8	126.5	127.3	119.9	104.0	102.9	114.6	119.9	103.2	145.3
Edmonton	84.9	76.7	87.9	112.3	104.3	96.1	88.9	94.1	96.1	90.0	97.1	72.6
Verm.	95.6	74.4	99.2	115.7	115.7	101.5	92.1	86.2	101.5	100.4	103.9	80.3
Fair.	74.4	66.1	98.8	90.9	112.2	91.7	82.5	81.9	84.4	94.3	90.9	74.4
Beaver.	65.3	71.4	98.0	107.4	113.4	99.7	86.2	84.6	86.7	101.4	102.8	82.3

Table 8 Monthly Average Dewpoint

	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
Med. Hat	-8	9	22	26	35	44	48	46	38	31	14	15
Leth.	-2	14	20	27	35	43	47	45	39	31	17	16
Calgary	-5	11	20	24	33	41	47	45	36	28	12	12
Edmonton	-11	4	15	25	34	44	50	49	40	30	10	9
Verm.	-19	0	16	25	35	45	51	49	39	29	6	7
Fair.	-23	6	14	24	32	42	48	47	38	29	0	5
Beaver.	-18	5	16	26	33	42	38	47	39	30	6	5

use of sunshine at Ranfurly. With these assumptions in mind, composite stations were formed at these two stations.

The fact that, the number of stations available was limited made it impossible to select stations at random. In fact every suitable station was chosen. If the province were divided up into its component farming areas, samples representing both farming areas and geographic areas of the province could be obtained by choosing a station from each area.

Figure 2 can be used to point out the various farming areas of the province. The map was prepared by W. Anderson².

The drier ranching area of the province, designated as region A, has very little crop production. This area of the province was justifiably excluded from a study involving the influence of weather on machinery operation, and has been omitted.

Region B which includes most of the irrigation area of Alberta, plays a large economic role in the farming segment of the economy. Although irrigation farming has not been considered, dry land farming in that area of the province was represented by Lethbridge.

A large grain producing area of the province, designated as region C, was represented on opposite corners by Calgary, and by Medicine Hat. Except along the western edge, yields are not high, but large acreages compensate for low yields, hence it was fitting that this area be represented.

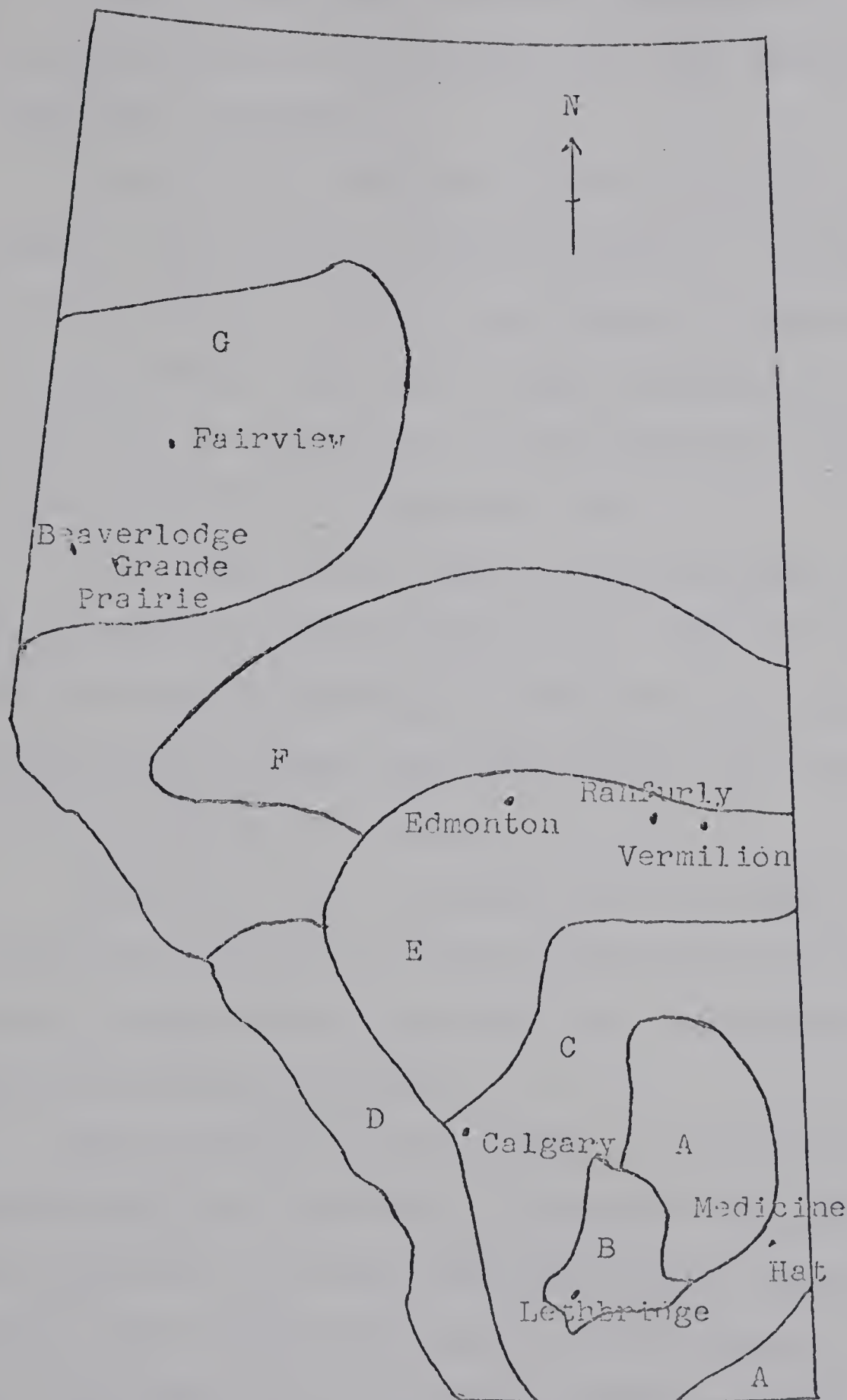


Figure 2. Map of Alberta Showing the Division of Alberta into the Predominant Farming Patterns and The Location of the Weather Stations.

Region D is the foothills ranching area of the province. Being unsuited to crop production, its exclusion from the study was justified.

Edmonton and Vermilion each represent a mixed farming area of the province labelled region E. Acreage per farm is less than in region C, but capital investment per farm is comparable. Because a large percentage of the land in this area is cultivated, a representative sample should have included this region as well.

The north central area of the province, shown as region F, is another mixed farming area. Edmonton and Vermilion are located practically on the border between region E, and region F, hence they may reflect the weather of one area as much as the other.

The Peace River district is relatively new and relatively segregated from the rest of the province. This area, designated as region G, was represented by both Beaverlodge and Fairview.

The weather stations chosen, as well as being geographically distributed throughout the province, appeared to represent the major farming areas of the province. Hence, even though the sample was chosen out of necessity, the province was as well represented as may be expected from a small sample.

3.6 Preparing the Data for Processing

Having decided upon the data required and the stations from which data was to be used, it was possible to order cards. A summary of the stations used, and the years considered is given in Table 9. The number of years used depended primarily upon the number of years for which cards were available. The cards for Edmonton and Calgary were available on campus for 1921 onward and this was the period used for these two stations. The Meteorological Branch suggested cards be ordered in lots of five years, either in 2 - 6 or 7 - 1 combinations, and as far as possible data was obtained back to 1922.

Table 9. Cards Put on Tape

<u>Station</u>	<u>Station No.</u>	<u>Years</u>
Edmonton	3012195	1921 - 1937
	3012200	1938 - 1961
	3012205	1963 - 1965
	3012208	1962
Vermilion	3016800	1947 - 1966
Calgary	3031080	1939 - 1966
	3031085	1921 - 1931
	3031100	1932 - 1938
Lethbridge	3033880	1938 - 1966
	3033890	1922 - 1937

<u>Station</u>	<u>Station No.</u>	<u>Years</u>
Medicine Hat	3034480	1922 - 1966
Beaverlodge	3070560	1922 - 1966
Fairview	3072520	1932 - 1966 except 1956

In total there were 102,000 cards to be handled. In order to facilitate computer handling, these cards had to be stacked on tape. One 2400 foot tape was required. The stacking process required about two hours of computing time once the cards were ready for stacking. The first time stacking was attempted, several cards with invalid characters were detected by the card reader, and the job had to be stopped. The invalid characters were found to be multiple punches, and occurred in either column 79, or column 80. In order to identify the invalid cards, all the cards were put through a card sorter set to reject anything by an X in column 79. In some cases as many as four numbers were punched in one column. Several legal characters eg. P,N, D,Q,\$,&, and = were discovered, in addition to at least as many different illegal characters. This might indicate special marking since they were found at all stations, and only between 1957 and 1962. Altogether, there were 600 cards with illegal characters. Since the illegal characters occurred only in the last two columns, the cards were duplicated omitting the last two columns, so that the information was not lost. The cards were then stacked on tape.

Once the cards were stacked on tape, they were sorted first according to station identification, and then according to date. This means that because a station number did not change in the middle of a year, the days within each year are in chronological order. However, since the station numbers did not necessarily get larger when they were changed, the years are not necessarily in chronological order.

The tape was then checked for completeness of data. The Computing Science Department suggested first writing a program in Cobol, to check for unexpected data in a particular column. Since the writer had no knowledge of Cobol, a Fortran program was written to check the data column by column for the columns of interest. The station number, the date, minimum and maximum temperature, and total precipitation were the only information of interest on the card hence, only columns 1 - 19, and columns 45 - 48 were checked. Records (or cards) with anything but a 3 in column 1, a 0 in column 2, and a 1, 3, or 7 in column 3 were written out. Columns 1 - 19 were checked for anything but numeric data, except for columns 14 and 17 which could contain a blank, a zero, or a minus sign. The data was also checked for months greater than 12, as well as for days greater than 31. Columns 45 - 48 were checked for anything but numeric characters blanks, or the letter T. The letter

L in column 48 indicates that it is not known whether precipitation occurred, but if it did occur, it will be included in the next day's total. The letter C in column 48 indicates that precipitation did occur on that day, but it will be included in the next day's total. Although the letters L and C were expected, it was of interest to know where they occurred, and they were written out as well. Table 10 is a summary of days with C or L in column 48.

A second program was used to locate missing days. This program had limited use. First the data had to be in chronological order within years. This presented difficulties when blanks occurred in the date field because, for example, 6612 7 would have been placed before 661201 in a sort program. This caused the checking program to lose count and write out every day. Alphabetic data could not be read in an I format, and an error condition arose when alphabetic data occurred in columns 1 - 13. When these misfit records were located it was possible to program around them. This was, however a hit and miss procedure.

Table 10 Days with Unknown Precipitation

<u>Station</u>	<u>Date</u>	<u>Column 48</u>	
		<u>C</u>	<u>L</u>
3012195	Aug 9, 1925	X	
	Feb 22, 1939	X	
	May 2, 1940	X	
	Jun 19, 1940	X	
	Sep 13, 1940	X	

<u>Station</u>	<u>Date</u>	<u>Column 48</u>	
		<u>C</u>	<u>L</u>
3031100	May 19, 1931	X	
	Dec 4, 1924	X	
	May 28, 1930	X	
	Jul 18, 1930	X	
	Sep 15, 1931	X	
3070560	Aug 8, 1926	X	
	Aug 3, 1962		X
	Sep 28, 1963	X	
	Feb 17, 1965	X	
	Sep 17, 1966	X	

After checking the tape with both programs, missing data were found to occur in several forms. Some days were missing completely, some days had missing temperature, some days had negative precipitation, and others had been mispunched making them unusable. Records with negative precipitation were found to follow records containing a C or an L in column 48. According to the Meteorological Branch, an X was punched in column 45 to indicate a cumulative precipitation. However, the IBM/360 interpreted this character as a minus sign, which resulted in a negative precipitation. Table 11 is a summary of missing data indicating what data were missing, and what was done about it.

If the correction is not specified, then the data were taken from the station listed in the monthly meteorological

summaries.²⁷ There were 88 missing days, 46 missing temperatures, 16 days with negative precipitation, and 10 mispunched cards totalling 160 days with missing data. This amounted to 0.086% missing, 0.045% with missing temperatures, 0.016% with negative precipitation, and 0.010% mispunched, or 0.157% of the cards with missing data.

A complete tape was created, which can be used with programs requiring, minimum and maximum temperature, and total precipitation. Allowance must be made to handle a T, C, or an L in column 48 otherwise the tape may be used without difficulty.

Table 11 Missing Data Summary

<u>Station</u>	<u>Date</u>	<u>Max Temp</u>	<u>Min Temp</u>	<u>Missing Neg Pre</u>	<u>Missing Card</u>	<u>Misspun Card</u>	<u>Correction</u>
3012195	Aug 10, 1925			x			
	Dec 2, 1931				x		
3012200	Nov 1-30, 1937	x					Altern. station
	Dec 22, 1937					x	
	May 5, 1957				x		
	May 29, 1957				x		
	Apr 7-18, 1959				x		
	June 24, 1959				x		
3012208	Dec 27-31, 1962				x		
3031080	Feb 23, 1939			x			
	May 3, 1940			x			
	June 20, 1940			x			
	Sept 14, 1940			x			
	Jan 5, 1944				x		
3031085	Apr 30, 1931	x	x				interpolation
3031100	May 20, 1931			x			

<u>Station</u>	<u>Date</u>	<u>Max Temp</u>	<u>Min Temp</u>	<u>Missing Neg Pre</u>	<u>Missing Card</u>	<u>Mispun Card</u>	<u>Correction</u>
3033880	Nov 17, 1949					x	
	Apr 19-21, 1959				x		
	Sept 2-4, 1964				x		
3033890	Oct 26, 1923				x		
	Nov 11, 1924					x	
	Dec 5, 1924				x		
	Mar 9, 1925				x		
	May 29 1930			x			
	July 19, 1930			x			
	Sept 16, 1931			x			
	Sept 19, 1931			x			
3034480	Oct 4, 1924					x	
	Jan 3-4, 1930					x	
	Aug 9-10, 1930	x	x				
	Apr 29-30, 1932	x	x				interpolation
	Nov 14-15, 1933	x	x				Altern. station
	Apr 3, 1936					x	

<u>Station</u>	<u>Date</u>	<u>Max Temp</u>	<u>Min Temp</u>	<u>Neg Pre</u>	<u>Missing Card</u>	<u>Mispun Card</u>	<u>Correction</u>
3034480	June 22, 1945	x	x				interpolation
	June 23, 1945		x				interpolation
	Sept. 27, 1963					x	
3070560	Dec 31, 1923					x	
	Mar 8, 1925				x		
	Oct 9, 1926			x			
	May 1, 1929					x	
	Jan 4-5, 1949				x		
	Jan 27, 1962	x					interpolation
	Aug 2, 1962			x			
	Aug 4, 1962			x			
	Sept 29, 1963			x			
	Feb 18, 1965			x			
	Sept 19, 1966			x			
	Dec 1-31, 1966				x		
3072520	Aug 3-7, 1935	x	x				
	Jan 2, 1946				x		

<u>Station</u>	<u>Date</u>	<u>Max Temp</u>	<u>Min Temp</u>	<u>Neg Pre</u>	<u>Missing Card</u>	<u>Missun Card</u>	<u>Correction</u>
3072520	Aug 8,				x		
	1955						
	Jan 1-31,				x		
	1957						
	Sept 22,					x	
	1958						

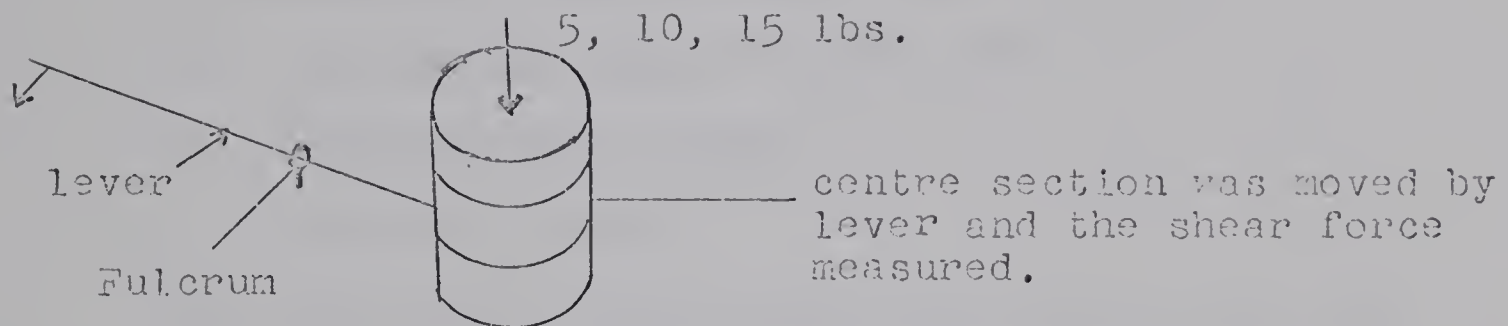
4. TRACTABILITY

4.1 Estimating the Shear Strength of Soils

29

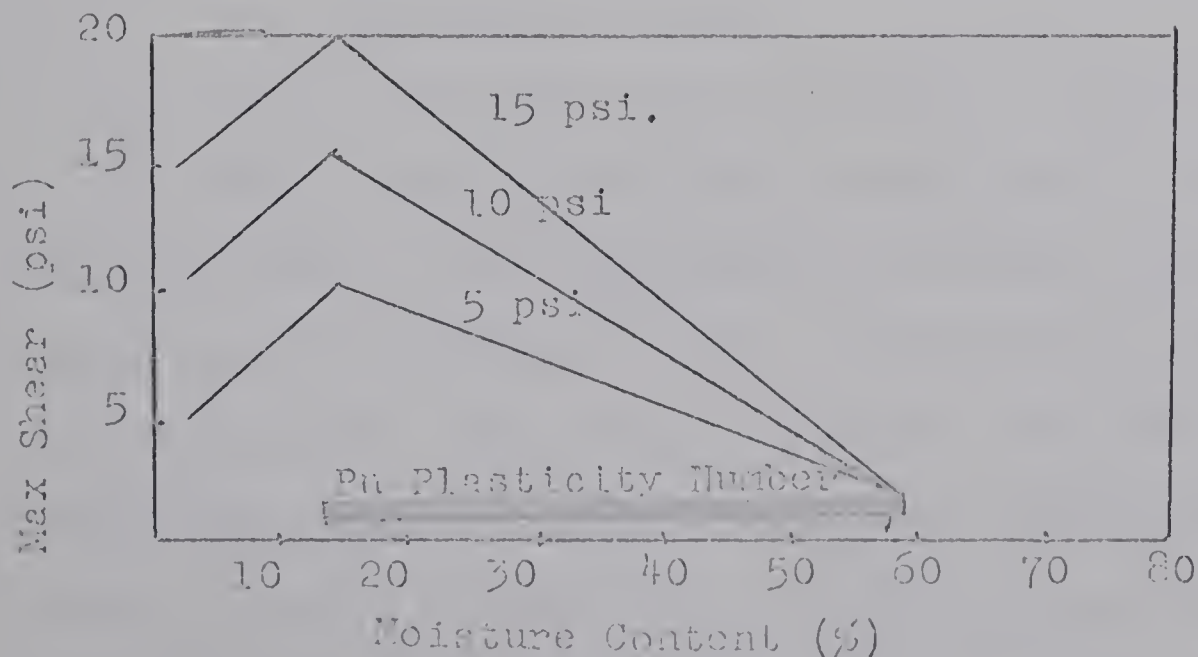
Nichols (1932) experimented with four clay soils, a clay loam, and a silt loam. He estimated shear strength experimentally using different confining pressures. The apparatus used can be seen in Figure 3.

Figure 3 Apparatus for Measuring Shear Strength



Using this technique, Nichols found the maximum shear force at or near the plastic limit (near maximum cohesive force). Maximum shear force depends upon confining pressure, as well as upon moisture content. A graphical example of Nichols' results can be seen in Figure 4.

Figure 4. Shear Strength with Varying Moisture and Confinement Pressure



Expressing these results in equation form shear strength is given as:

$$F_s = \frac{(P_u - M)(0.06P_n + P + 1.8)}{P_n}$$

where F_s = shear strength

P_u = upper plastic limit (liquid limit)

M = moisture content (%)

P_n = plasticity number = $0.6C - 12$

C = percent clay content

P = pressure in psi.

This equation is not accurate for soils with a low plasticity number (low clay content). Shear resistance in pure sand is dependent upon particle shape (internal resistance), and confining pressure, and shows no increase in shear strength with variation in moisture content. The relationship for sand may be expressed as:

$$S_f = P \tan \phi$$

where $\tan \phi$ = coefficient of friction

and P = confining pressure.

Silty soils on the other hand, are quite unpredictable, and may behave anywhere between a sandy soil and a clay soil. Because of the difficulty in determining shear resistance in non-plastic soils only plastic soils have been considered. This being the case the number of non-working days will be overestimated for non-plastic soils. However, this is perhaps more desirable than underestimating

the number of non-working days.

According to Nichols the shear strength that a soil is capable of developing is dependent upon confining pressure and moisture content. Figures 5, 6 and 7 illustrate the confining pressure required to develop a particular shear stress for a range of moisture contents for three particular soils in the province of Alberta. A description of Alberta soils is given in section 4.2. The shape of the curves is the same for each soil, except that they shift to the left or right depending upon the liquid limit, and they shift up or down depending upon clay content.

Figure 5. Shear Strength Curves for Malmo SiC

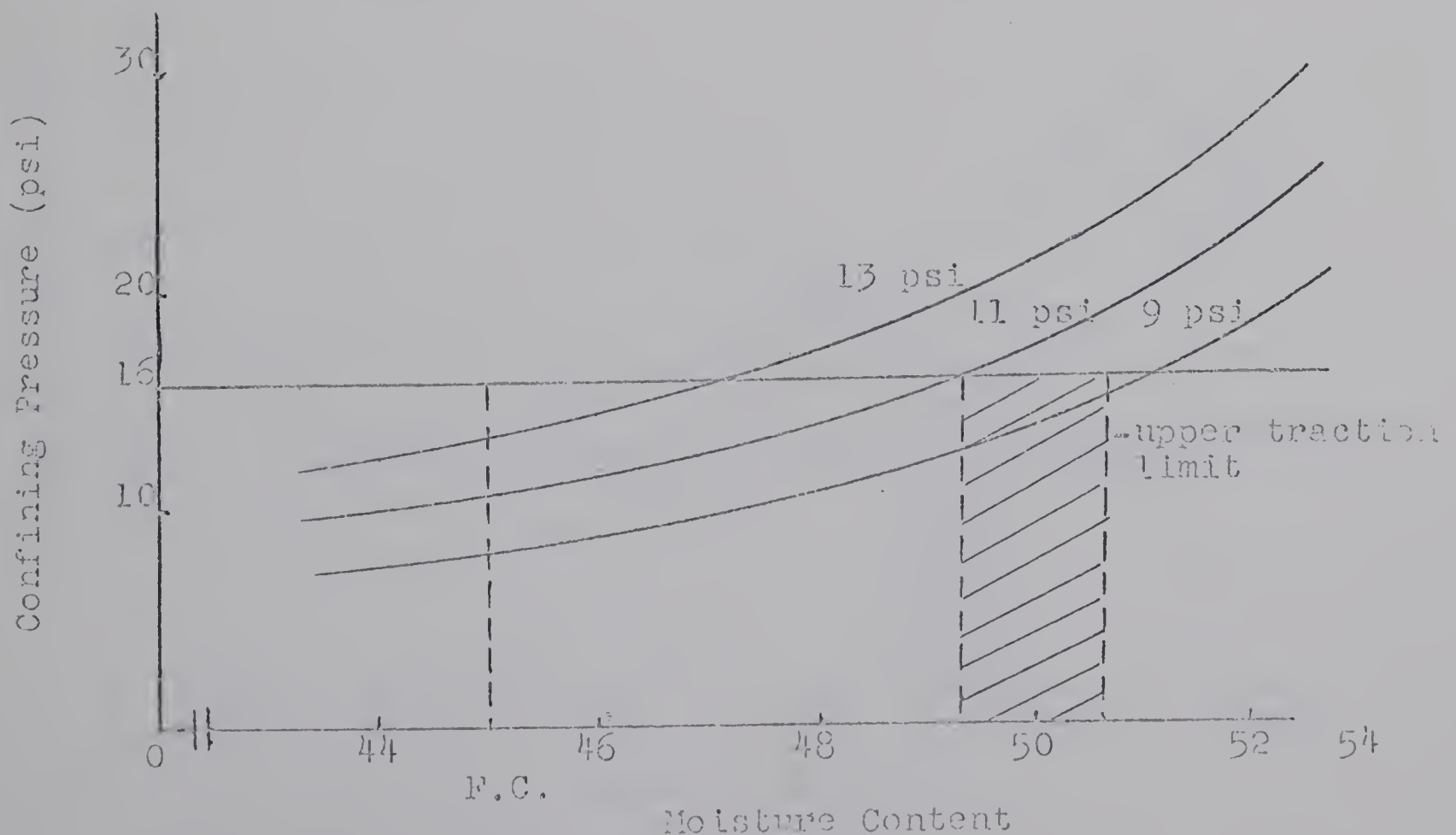


Figure 6. Shear Strength Curves for Seven Persons C

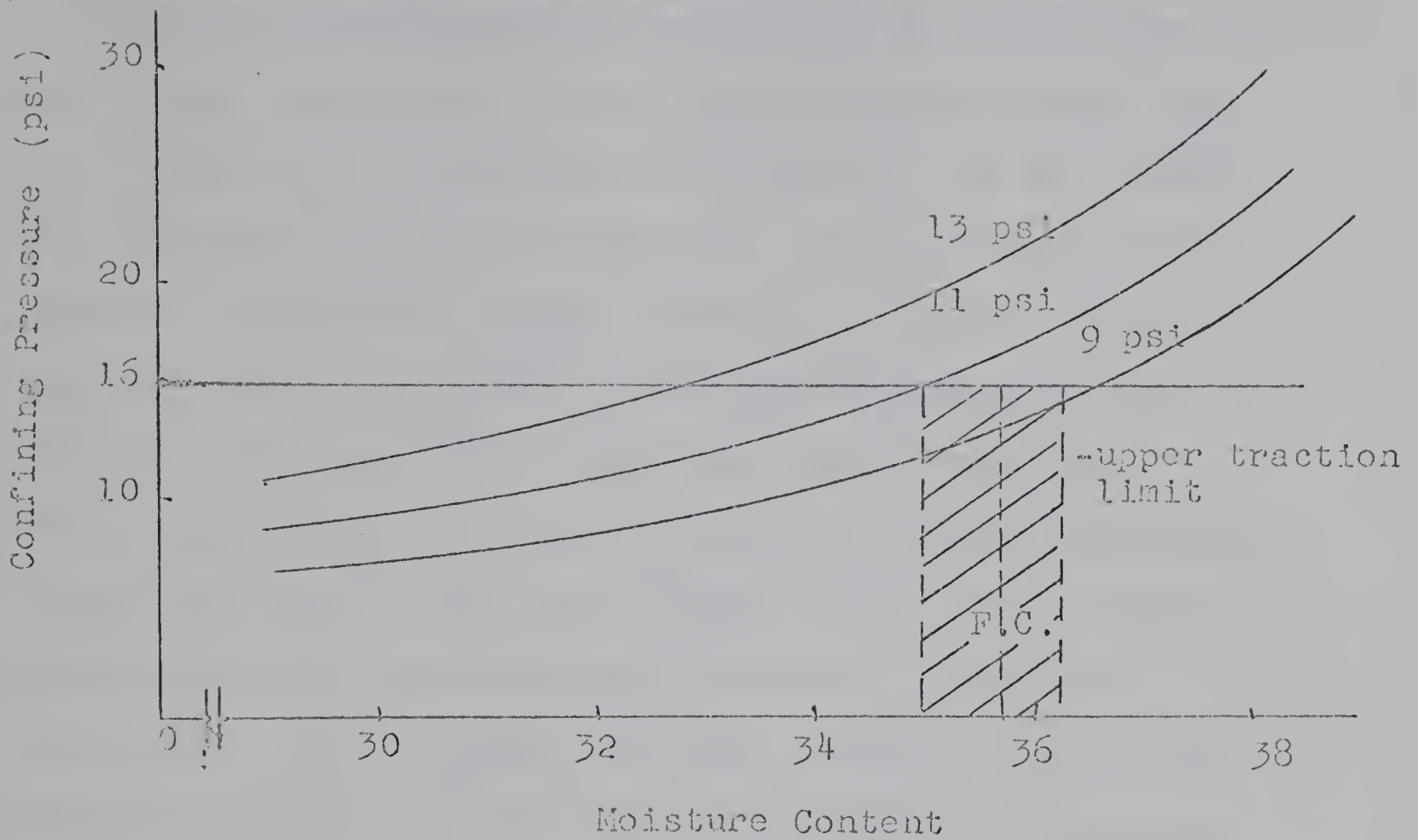
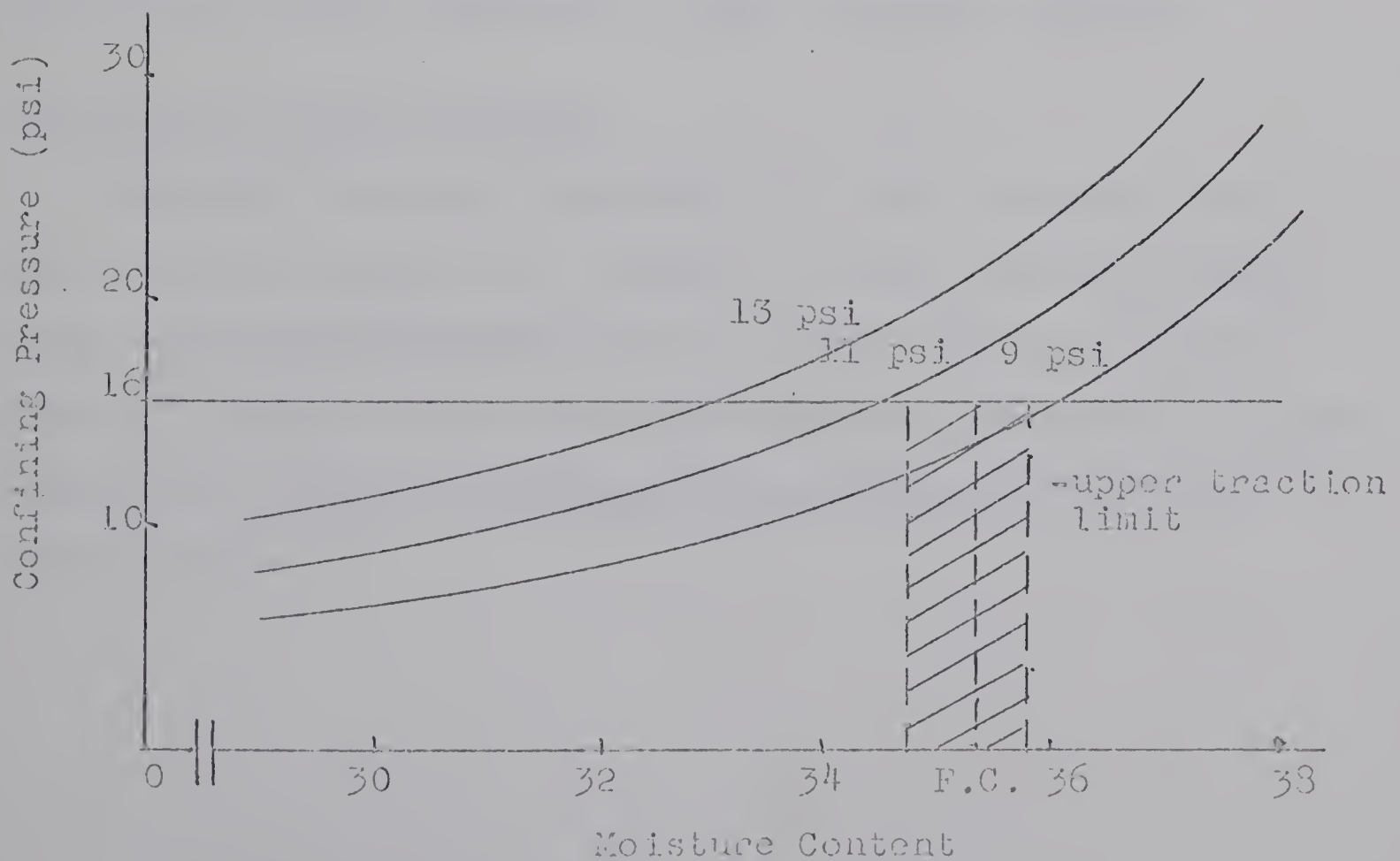


Figure 7. Shear Strength Curves for Coaldale CL-C



The confining pressure exerted by a tractor tire is not easily determined, but if the resistance of the tire is assumed to be negligible, the pressure can not exceed the inflation pressure of the tire. The recommended inflation pressure for larger tractors in common use in Alberta (eg. the John Deere 5020, or the Massey-Ferguson 1130) is 16 psi. This means that shear strengths requiring a confining pressure in excess of 16 psi. are not obtainable, making the part of the curve about 16 psi., of no use in determining the shear strength available to pull an implement. If at a given moisture content, a confining pressure of more than 16 psi. is required to develop the necessary shear strength for field operation, then field operations are not possible at that moisture content.

4.2 Soils in the Province

Because the shear strength of a soil depends upon its clay content, as well as a number of other soil properties, these soil properties have been examined for the province. Table 12 indicates the mechanical analysis of surface samples of Alberta soils, as determined by members of first year soils courses.

Table 12 Mechanical Analysis of Alberta Soils (Ap horizon)

Soil Zone	Soil Series	Soil Class	Mechanical Analysis		
			%S	%Si	%C
Brown	Cavendish	SL	77	11	12
	Foremost	L	45	35	20
	Seven Persons	C	18	32	50
Dark Brown	Carmangay	LS	81	10	9
	Granum	L	42	37	21
	Coaldale	CL-C	28	30	42
Thin Black	Irma	LS-SL	77	12	11
	Elnora	L	37	38	25
	Three Hills	C	16	36	58
Black	Peace Hills	LS	82	10	8
	Angus Ridge	L	42	33	25
	Malmo	SiC	15	35	50
Grey Wooded	Culp	LS	80	8	12
	Breton	L	42	36	22
	Maywood	CL-SiCL	30	42	28

A number of other soil characteristics were of interest and are included in Tables 13 - 17. These soil properties were also determined by the members of the first year soils courses.

Table 13 Liquid Limit of Alberta Soils (Ap horizon)

	<u>LS-SL</u>	<u>L</u>	<u>SiCl-C</u>
Brown	19.1	28.8	45.5
Dark Brown	19.1	26.2	42.7
Thin Black	23.3	39.3	58.6
Black	19.8	41.7	59.7
Grey Wooded	13.6	25.9	36.1

Table 14 Field Capacity of Alberta Soils (Ap horizon)

	<u>LS-SL</u>	<u>L</u>	<u>SiCl-C</u>
Brown	12.0	21.8	35.7
Dark Brown	12.4	23.9	35.3
Thin Black	16.3	32.3	46.5
Black	11.4	33.0	45.0
Grey Wooded	9.6	22.5	29.3

Table 15. Organic Matter of Alberta Soils (Ap horizon)

	<u>LS-SL</u>	<u>L</u>	<u>SiCl-C</u>
Brown	2.6	2.6	4.9
Dark Brown	1.9	3.9	3.2
Thin Black	4.0	8.3	7.0
Black	2.6	10.9	12.8
Grey Wooded	1.7	2.7	3.7

Table 16. Bulk Density (A.S.G.) of Alberta Soils (Ap horizon)

	<u>LS-SL</u>	<u>L</u>	<u>SiCl-C</u>
Brown	1.4	1.3	1.1
Dark Brown	1.4	1.3	1.2
Thin Black	1.3	1.2	1.2
Black	1.4	1.0	1.1
Grey Wooded	1.3	1.2	1.1

Table 17. Permanent Wilting Point of Alberta Soils (Ap horizon)

	<u>LS-SL</u>	<u>L</u>	<u>SiCl-C</u>
Brown	5.8	10.3	22.3
Dark Brown	5.2	9.6	18.1
Thin Black	7.2	15.4	23.5
Black	5.9	16.5	23.5
Grey Wooded	3.7	7.6	11.1

The program developed by Baier and Robertson considered a fixed depth of moisture rather than a fixed depth of soil. It was also of interest to know the depth of soil equivalent to one inch of available water. The following equation may be used to determine soil depth.

$$\text{Depth of water} = \frac{dbn}{100}$$

where d = depth of the soil horizon

b = bulk density (A.S.G.)

n = percent available water

Available water may be found by subtracting the moisture content at the permanent wilting point from the moisture

content at field capacity. Table 18 is a summary of the depth of soil per inch of water for Alberta Soils.

Table 18. Depth of Soil Per Inch of Available Water

	<u>LS-SL</u>	<u>L</u>	<u>SiCl-C</u>
Brown	12"	7"	7"
Dark Brown	10"	5"	5"
Thin Black	8"	5"	4"
Black	13"	6"	4"
Grey Wooded	12"	6"	5"

4.3 Determination of Soil Tractability

In order to determine the moisture content above which field work was impossible, a John Deere 5020 was used as an example. This tractor is normally equipped with 24.5:32 rear tires, and 11.00:16 front tires, with outside diameters of 71 in. and 38 in. respectively. The Nebraska Test²⁸, done with 18.4:38 rear tires, indicates the JD 5020 has a wheel base of 102 - 106 in., and a drawbar height of 20 in.¹⁸ Traction Tests indicate that a 24.5:32 tire, and an 18.4:38 tire have approximately the same loaded radius, which means the drawbar height will be the same with either tire. The weight distribution with 24.5:32 tires (single) with liquid ballast, and cast iron ballast is 13,900 lbs. on the rear, and 4800 lbs. on the front.

¹⁸
Traction Tests indicate that the maximum drawbar pull

is 42.5% of the weight on the rear wheels, which in this case amounts to 5900 lbs. In addition to drawbar pull, consideration must be given to the effect of rolling resistance on the required shear strength. No work was found specifically relating rolling resistance of a tire, to soil moisture content. Janosi²³ and Barger et al.⁷ indicate that rolling resistance is a function of tire diameter. Using the relationship given by Barger et al., the coefficients of rolling resistance (C) for tilled loam are,

$$C = 4.2(71)^{-0.8} = 0.088 \text{ (rear)}$$

$$C = 4.2(38)^{-0.7} = 0.145 \text{ (front)}$$

Rolling resistance may be determined by multiplying these coefficients by the respective weights on the rear and front wheels, but in doing this weight transfer must be considered. Weight transfer is determined by taking moments about a point on the ground directly below the rear axle, in which case weight transfer is equal to the pull, times the drawbar height, divided by the wheel base, or 1130 lbs. The tractor weight is now distributed 15,000 lbs. on the rear, and 3700 lbs. on the front. The rolling resistance (R) under these conditions is,

$$R = 0.088 (15,000) + 0.145 (3700) = 1860 \text{ lbs.}$$

The coefficients of rolling resistance (C), and rolling resistance (R) on Fall Rye seeding are,

$$C = 1.6 (71)^{-0.7} = 0.042 \text{ (rear)}$$

$$C = 1.6 (38)^{-0.7} = 0.063 \text{ (front)}$$

$$R = 0.042 (15,000) + 0.063 (3700) = 260 \text{ lbs.}$$

If the rolling resistance is 1860 lbs., and the implement draft is 5900 lbs., the total draft is 7760 lbs. However, if the rolling resistance is only 880 lbs. the total draft is 6760 lbs. Traction Tests indicate that the contact area of the rear tires with the soil is 884 sq. in., which means that on tilled loam the required shear strength is $7760/884 = 8.8$ psi., and on Fall Rye seeding $6760/884 = 7.7$ psi.

Reece³⁴ indicates that the maximum shear value that a soil will develop is obtained only at 100% slip, and that at a normal slip of 15%, only 20% of the maximum shear is obtained. This means that the maximum soil shear strength required under the above conditions is 11 psi. and 9.6 psi. for tilled loam and fall Rye seeding respectively.

Assuming a confining pressure of 16 psi., a shear strength of 11 psi. is developed at 49.4% moisture content in a Malmo silty clay - clay soil (Figure 5), whereas 9.6 psi. shear strength is developed at 50.7% moisture. Both these moisture contents are slightly above field capacity (45%). In a Seven Persons clay soil (Figure 6), however, 11 psi. shear strength is developed at 35% moisture content, and 9.6 psi. shear strength is developed at 36.3% moisture. In this case field capacity (35.7%) is between these two moisture contents. A similar situation is found in a

Coaldale clay loam - clay (Figure 7), where a shear strength of 11 psi. is developed at 34.8% moisture, and 9.6 psi. shear strength is developed at 35.9% moisture. As in the Seven Persons clay, field capacity (35.3%) falls between these two moisture contents. In each case a small moisture change makes an appreciable change in shear strength.

In two of the soils described above, the critical moisture content appears to be in the neighborhood of field capacity. Browning¹² suggests that optimum tillage conditions occur at a moisture content slightly below field capacity. Hence for these two soils as well as for non-plastic soils, it seems reasonable to choose a moisture content slightly below field capacity, as the criterion for classifying a day as a work day or a non-work day.

In the third soil described above the critical moisture content appears to be above field capacity. Buckman and Brady,¹³ and Bayer⁸ indicate that the structure of fine textured soils may be damaged if tillage operations are performed at high moisture contents. Hence, good farming practice would prohibit tillage at moisture contents above field capacity, and the choice of a critical moisture content slightly below field capacity will not give a criterion that is too low.

Tillability of fine textured soils may be determined by the optimum moisture for good soil structure, rather than

whether or not it is possible to pull a tillage implement in the field. However, in an attempt to limit the number of variables, the criterion for classifying a day as a work day or a non-work day was based as far as possible upon the possibility of pulling an implement in the field.

In a clay - clay loam, one inch of available soil moisture corresponds to approximately five inches of soil, or the top three zones of the Soil Moisture Budget. Sowers and Sowers⁴⁰ indicate that pressure under a foundation decreases with depth. By analogy pressure under a tire should decrease with depth, making soil at lower depths less important in determining soil tractability. This being the case, and the fact that the Versatile Soil Moisture Budget did not indicate moisture removal from Zone 4, except during the period from jointing to the hard dough stage (June 17 - September 3), only the top three zones were used to classify a day as a work day or a non-work day. In coarser textured soils only the top two zones needed to be considered, since one inch of water was held in a greater depth of soil.

If only the top two zones are considered, it is not necessary to have an exact estimate of the moisture content above which tillage operations are not possible. The reason for this is that small moisture changes make relatively large differences in the shear strength of the soil, and in the top two zones moisture changes are quite rapid. Hence

the time required for the soil to dry sufficiently is quite short. In this case the number of non-work days will be less. If the third zone is considered, then exact critical moisture estimates are more important, since the moisture change is much slower and a 1% moisture change might take one or two days.

Since a season includes the months April through October some consideration should be given to snowfall. The Soil Moisture Budget treats snow as an equivalent amount of rain. However, twelve inches of snow would probably create more non-work days than a one inch rainfall. R.W. Longley, Professor of Meteorology suggested that if there was snow on the ground in the Spring of the year, the temperature would not likely rise above 45°F. In the Fall because of heat in the ground, the snow may have been gone at a temperature of 40°F. Hence, it was considered that there was snow on the ground in the Spring when temperatures did not exceed 45°F. during the day, and in the Fall when temperatures did not exceed 40°F.

5 RESULTS

5.1 Classifying the Data as Work Days and Non-Work Days

The moisture content above which it was impossible to perform tillage operations appeared to be at or near field capacity. Since field capacity was the upper limit of the Soil Moisture Budget a moisture content of 99.5% of capacity seemed to be a reasonable choice of criteria for classifying a day as a work day or a non-work day. A trial run was made using criteria of 99.5% of field capacity in the top three zones, with no consideration for snowfall. Based on the results of check data (described in section 5.3), the number of non-work days appeared to be underestimated. It was also apparent from this trial run, that some consideration of snowfall would improve the correlation in early Spring and late Fall.

Since this trial run seemed to underestimate the number of non-work days, a second set of conditions was used to classify the data. In the second run a day was classed as bad if the moisture content in any one of the top three zones was above 95% of field capacity, or if there was snow on the ground. The inclusion of the top three zones was only justified in medium or heavy soils. In sandy soils only the top two zones needed to be considered. Hence an additional run was made to determine probability values for sandy soils. In this run the criteria were the same except that only two zones were considered.

Arising out of these runs two classifications, one for heavy and medium soil, and one for light soil, were developed and are shown in Appendix 8.1. Both of these runs showed much closer correlation with the check data, than did the first run.

In classifying the data, a work day was designated as an X and a non-work day was designated as a (.). In order to make the X's and dots more useful summaries were made of the frequency of runs of n bad day , frequency of runs of n good days, and the number of years with n bad days in a month. These summaries have been included in Tables 19 - 24.

Table 19 Frequency of Runs of n Bad Days (Medium to Heavy Soil)

EDM	Apr	21	9	2	4	3	1	0	5	3	3	5	2	2	3	2	2	2	4	2	2	0	1	1	2	2	0	1	2	2	0	1	0	3	0
	May	43	16	12	11	9	4	7	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	June	60	21	20	16	14	9	3	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	July	82	42	22	15	11	7	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Aug	65	32	22	72	41	5	3	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Sept	32	15	2	2	5	0	3	2	3	1	3	2	0	3	2	1	4	1	2	0	2	0	1	1	0	0	0	0	0	0	0	1	0	
	Oct	71	11	1	5	8	1	1	1	1	2	2	0	1	2	0	0	2	1	0	1	1	0	0	0	0	0	1	1	0	0	0	1	0	2
VERM	Apr	9	5	2	2	1	2	0	1	1	1	2	1	1	1	0	3	1	1	0	0	2	0	1	1	1	0	0	0	0	0	0	3	0	
	May	17	11	3	6	3	1	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	June	22	12	5	7	2	3	0	2	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	July	38	14	4	4	2	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Aug	29	12	10	8	4	3	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Sept	10	5	4	1	2	0	3	1	1	2	0	1	1	0	0	1	1	0	2	0	0	0	1	1	0	0	1	1	0	0	0	0	0	
	Oct	6	3	4	0	1	0	0	1	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8	
CAL	Apr	33	18	7	4	3	9	6	3	4	4	5	4	7	1	2	2	1	3	1	0	1	3	0	0	0	1	1	0	0	2	0	2	0	
	May	52	16	18	11	8	2	9	4	3	1	1	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	June	46	29	19	15	13	9	5	1	6	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
	July	66	27	20	10	5	3	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

[illegible]

June	6420141510	4	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
July	592620811	4	3	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aug	56291613	8	7	4	1	2	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sept	2412963	1	5	1	0	3	0	2	1	2	1	1	0	2	3	3	2	0	2	1	0	0	4
Oct	625223	1	0	0	0	1	0	0	2	0	0	0	0	0	1	1	2	1	0	0	1	129	
Apr	12201000	1	1	0	0	1	0	0	1	0	2	0	1	0	1	1	2	2	1	2	3	4110	
May	26198976	1	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
June	34221412	8	2	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
July	52221811	4	2	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Aug	482011511	3	2	2	3	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sept	18134612	2	1	1	1	2	1	0	1	1	3	1	1	0	2	0	1	1	0	0	1	0	
Oct	5271021	0	0	0	0	0	0	0	1	1	0	0	0	3	0	1	0	2	0	3	0	118	

Apr	1	2	2	0	1	0	0	0	1	1	0	0	0	1	0	1	0	1	1	2	2	1	2	3	4	11	0
May	2	6	1	9	8	9	7	6	1	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
June	3	4	2	2	1	4	1	2	8	2	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
July	5	2	2	2	1	8	1	1	4	2	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aug	4	8	2	0	1	1	5	1	1	3	2	2	3	1	0	2	0	0	0	0	0	0	0	0	0	0	0
Sept	1	8	1	3	4	6	1	2	2	1	1	1	2	1	0	1	1	3	1	1	0	2	0	1	0	0	3
Oct	5	2	7	1	0	2	1	0	2	1	0	0	0	0	0	0	1	1	0	0	0	3	0	1	0	0	1

Table 20 Frequency of Runs of n Good Days (Medium to Heavy Soil)

[illegible]

CAL	Aug	252916111612	8	7	2	4	8	6	7	0	1	1	0	4	1	1	0	1	0	1	0	0	1	1	1	2							
	Sept	12211114	6	4	2	6	4	4	2	3	1	5	1	2	2	1	2	1	1	0	0	1	0	1	1	0							
	Oct	7	8	4	9	2	4	3	6	3	0	5	3	1	1	2	2	0	1	0	1	1	0	0	0	3							
LETH	Apr	221516	7	9	5	6	6	4	3	2	2	0	1	3	1	2	0	2	3	0	0	0	0	0	0	0							
	May	1517	8	1	2	1	1	1	5	6	3	5	8	5	3	2	4	2	3	1	4	0	0	1	0	0	2						
	June	321721221613	7	4	4	6	4	4	3	2	3	1	0	1	1	2	1	0	1	0	1	0	1	0	0	1	0						
	July	14111210	7	1	2	9	6	6	4	5	1	1	3	6	0	3	0	5	1	2	3	1	1	0	3	1	0	3					
	Aug	211114	7	1	0	5	1	0	6	3	6	2	3	2	4	1	2	2	0	3	1	3	1	0	0	1	0	0	7				
	Sept	11	9	1	1	7	6	8	9	1	2	4	3	2	3	3	1	1	3	0	1	2	2	1	0	0	0	1	0	5			
	Oct	4	1	2	5	9	4	2	6	2	2	2	4	2	1	0	2	3	1	3	1	2	2	2	3	0	0	1	1	0	1	2	
MED HAT	Apr	16141110	6	7	3	8	1	5	2	1	4	0	2	0	2	2	3	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	
	May	1610	7	9	5	8	6	6	8	4	7	2	8	4	1	3	4	2	2	0	3	1	1	0	0	0	1	0	0	2	3		
	June	20271613	8	9	1	1	0	8	4	6	5	3	5	1	1	4	4	0	1	0	1	0	0	0	0	0	0	2	0	0	0	0	
	July	1311	9	1	4	1	0	4	5	5	1	4	1	0	3	3	5	2	3	3	2	1	1	2	0	1	0	0	1	0	2	0	4
	Aug	1110	9	8	1	1	2	1	1	7	3	6	2	2	6	3	6	4	3	1	2	1	1	2	1	1	1	0	0	0	0	5	
	Sept	13121313	6	6	7	2	4	2	2	2	3	2	2	1	0	1	2	1	1	1	1	0	1	2	0	3	1	5	0				
	Oct	4	4	4	3	7	3	3	4	6	2	3	2	2	1	3	4	0	1	1	3	2	0	0	0	0	1	2	3	0	5		
BEAVER	Apr	5	6	3	4	6	3	3	3	0	2	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

BEAVER

May	13181013	6	8	7	4	6	7	3	2	0	3	6	2	2	1	1	1	4	1	0	3	0	0	1	0	1	0	2
June	28152413	8	10	7	16	5	6	5	2	2	1	4	1	2	0	1	2	1	0	1	2	0	0	1	0	1	0	1
July	2321152111	8	11	4	12	5	2	8	4	2	1	2	0	1	0	0	2	2	4	0	1	0	0	1	0	0	0	0
Aug	292317	9	18	12	7	3	6	2	5	2	6	3	4	2	1	1	1	0	2	0	1	0	0	0	1	0	0	2
Sept	1214	9	6	7	3	2	2	5	2	4	5	0	0	2	0	0	2	4	0	0	2	0	1	0	0	0	0	1
Oct	4	6	2	1	1	2	0	1	4	1	1	0	1	4	0	0	0	1	0	0	0	0	0	0	0	0	0	0

FAIRVIEW

Apr	7	5	2	1	2	3	2	1	1	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
May	8	6	9	10	8	7	8	1	7	3	2	2	1	1	1	0	0	2	0	1	2	1	0	2	3	2	0	0
June	15	14	11	11	11	11	7	5	4	4	5	7	3	2	0	3	0	1	0	2	0	2	3	1	0	0	0	1
July	27	20	17	9	13	3	5	5	3	3	2	1	2	4	0	3	1	1	0	2	1	1	0	1	1	0	0	1
Aug	18	14	15	8	17	6	6	6	3	6	1	2	3	2	1	3	0	0	1	0	0	0	0	0	2	0	1	1
Sept	9	3	10	5	3	2	1	3	7	0	1	2	3	1	2	2	1	1	2	0	0	1	0	2	0	0	0	1
Oct	5	4	3	3	3	1	2	0	1	1	1	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0

Table 21 Number of Years with n Bad Days Per Month (Heavy to Medium Soil)

EDM	Apr	0	0	0	0	1	1	1	2	3	0	2	0	1	3	1	1	1	1	3	5	2	3	0	4	1	3	3	0	3	0
	May	1	2	3	5	5	3	1	5	5	1	1	2	2	3	2	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0
	June	1	1	0	6	3	4	3	4	2	2	4	5	1	1	3	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0
	July	0	0	0	2	4	5	6	1	1	5	5	7	4	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Aug	1	2	2	0	3	3	2	4	3	2	5	3	4	2	1	2	2	1	2	0	0	0	0	0	0	0	0	0	0	0
	Sept	1	5	3	0	2	0	1	1	1	3	1	1	1	3	3	0	4	2	2	2	1	1	1	1	1	0	0	1	1	0
	Oct	0	3	1	1	1	2	0	2	2	1	3	0	1	1	0	0	1	0	1	2	2	1	0	0	1	1	1	0	2	1
VERM	Apr	0	0	0	0	0	0	0	0	0	1	1	2	0	0	1	2	0	1	1	0	1	1	2	0	1	1	2	0	3	0
	May	3	1	5	1	1	1	0	2	0	0	1	1	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	June	2	0	3	0	2	1	1	1	4	0	0	1	1	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
	July	0	0	1	0	2	1	2	5	2	1	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Aug	0	1	2	2	1	2	1	1	1	4	0	0	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0
	Sept	1	1	2	0	0	1	0	3	0	0	0	0	0	1	0	2	3	0	2	0	0	1	0	1	0	0	2	0	0	0
	Oct	0	1	3	1	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	8
CAL	Apr	0	0	0	0	0	2	1	3	0	2	2	1	1	0	5	2	2	2	1	2	3	6	0	2	1	3	3	0	2	0
	May	2	3	2	3	2	3	2	3	1	2	6	3	3	2	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	June	2	1	1	1	3	5	2	1	3	8	2	2	3	1	2	2	2	1	1	0	0	1	0	0	0	0	0	0	0	0

CAL	July	2	5	3	7	3	6	2	4	3	0	2	3	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0
	Aug	4	3	2	3	5	3	7	4	3	1	2	2	1	1	0	1	1	0	0	0	1	0	0	0	0	0	0
	Sept	3	3	2	4	0	4	2	0	1	3	3	2	2	3	1	2	1	0	2	2	1	0	1	0	0	1	0
	Oct	3	1	1	1	0	1	2	3	0	2	0	0	1	3	3	1	3	0	0	1	0	1	1	2	2	1	0
LETH	Apr	0	0	0	2	0	2	0	0	8	1	1	3	2	2	2	3	0	3	2	3	1	2	4	0	0	1	0
	May	2	4	1	1	3	7	2	5	3	3	1	1	1	1	1	0	2	1	0	0	0	0	0	0	0	0	0
	June	0	2	3	6	2	8	2	3	2	2	1	1	2	4	1	2	0	1	0	0	0	0	0	0	0	0	0
	July	7	5	9	3	5	5	1	2	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Aug	4	6	5	4	2	6	3	4	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Sept	0	2	7	3	2	1	0	1	5	1	2	3	1	0	0	1	2	1	1	1	2	1	0	1	0	0	1
	Oct	3	2	2	2	3	4	1	0	1	0	0	0	3	1	2	2	1	2	1	0	1	2	0	2	3	0	1
MED HAT	Apr	0	0	0	2	1	0	2	2	1	3	6	1	4	2	1	2	1	5	0	5	1	2	1	1	0	1	0
	May	5	3	4	6	2	2	5	3	2	1	1	2	0	0	2	2	1	0	0	0	0	0	0	0	0	0	0
	June	2	3	6	5	4	7	3	2	1	1	1	5	2	1	0	2	0	0	0	0	0	0	0	0	0	0	0
	July	5	9	4	8	6	3	4	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Aug	6	7	2	5	4	3	6	2	4	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
	Sept	4	4	1	2	2	1	3	2	1	1	4	0	1	3	2	1	3	1	0	3	0	0	0	1	0	0	0
	Oct	2	4	1	3	1	0	0	4	3	1	4	1	0	0	4	0	1	1	0	0	2	1	0	0	1	2	1

BEAVER

Apr	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	2	0	2	0	1	2	4	0	4	4	2	3	2	1	5	0
May	2	2	4	5	5	3	2	4	1	4	1	1	1	2	1	1	2	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
June	2	3	5	5	4	8	3	1	0	1	4	2	2	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
July	4	0	5	4	2	4	5	5	2	1	3	1	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Aug	1	2	6	3	2	1	4	1	2	3	1	4	3	2	3	1	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0
Sept	0	1	2	2	1	0	2	2	1	3	0	3	1	2	1	0	0	3	1	0	5	1	2	1	4	1	0	1	0	4	0	0
Oct	0	0	1	0	0	0	0	0	1	0	1	1	0	1	0	2	0	0	0	1	3	0	0	0	0	0	0	1	2	1	2	9

FAIRVIEW

Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	1	2	2	0	3	3	4	1	1	0	0	
May	2	6	3	3	3	1	3	3	0	0	2	2	1	2	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
June	2	4	0	1	5	2	4	3	3	1	5	2	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
July	4	1	1	2	3	0	2	4	2	1	5	3	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aug	1	4	2	1	1	2	3	1	3	4	1	0	4	0	1	2	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
Sept	0	1	0	1	2	2	0	3	1	2	0	2	0	1	1	1	1	1	1	2	1	0	2	0	3	0	1	0	0	3	0	0
Oct	0	0	1	0	0	0	0	1	0	1	0	0	1	0	0	0	1	1	0	0	1	0	1	3	1	2	0	1	0	1	1	8

Table 22. Frequency of Runs of n Bad Days (Sandy Soils)

[illegible]

[illegible]

Apr	272515	49681363	11111000	10000000	0000
May	373173	12000000	00000000	00000000	0000
June	553594	10000100	00000000	00000000	0000
July	733414	21010000	00000000	00000000	0000
Aug	583117	43200000	00000000	00000000	0000
Sept	2219911	86441101	00000001	10000000	0000
Oct	1391284	42201011	23102030	11202010	1010

CAL

July	272219121210	7	5	5	5	4	4	3	3	1	3	5	2	1	2	0	1	1	1	2	0	0	0	1	2					
Aug	3331171715	711	8	2	7	6	7	5	3	1	1	0	2	3	1	0	0	1	1	0	0	1	0	2	2					
Sept	2122161411	616	6	8	5	2	3	3	1	4	1	2	3	2	1	1	3	0	0	1	0	0	1	0	2	0				
Oct	10171115	6	4	5	6	5	2	4	1	3	1	0	3	4	2	2	3	1	1	0	0	3	1	1	1	0	4			
LETH	372719101010	8	4	5	2	5	3	3	2	1	3	2	1	1	1	1	0	2	0	0	0	0	0	0	0	0				
May	211710171010	5	9	7	7	5	5	4	3	2	2	3	2	2	6	0	0	0	1	1	0	1	0	0	0	2				
June	3118261718	610	8	4	5	3	3	6	3	1	0	2	2	1	2	1	0	1	0	1	0	1	0	0	1	0				
July	18	91312	712	9	6	5	6	3	3	1	3	6	0	3	0	4	1	2	3	2	1	0	3	1	1	0	3			
Aug	2410101112	6	610	7	4	7	1	4	2	3	2	2	2	1	1	2	2	3	1	0	0	1	1	0	0	7				
Sept	17131021	8	912	3	7	3	4	4	3	2	2	2	3	0	1	2	3	0	0	1	0	0	1	0	5	0				
Oct	919	813	5	3	9	8	4	4	6	2	2	0	1	1	2	2	1	1	3	1	3	2	1	1	0	0	4			
MED HAT	39181817	8	7	410	3	4	3	3	2	0	5	1	0	4	2	1	1	1	2	0	1	0	0	1	0	1	0			
May	2412	713	5	5	510	5	6	9	3	9	3	2	3	2	1	3	1	4	1	1	1	0	0	1	0	0	2	3		
June	3125191212	51314	6	3	6	6	2	8	1	2	3	4	1	0	0	1	1	0	0	0	0	0	0	2	0	0				
July	18	81112	411	4	2	71212	4	3	5	2	2	3	4	2	1	1	2	0	1	0	0	1	0	2	0	4				
Aug	17	81010	8	81710	1	6	4	2	5	4	4	5	4	1	2	1	1	2	1	1	1	1	0	0	0	5				
Sept	1220131411	6	9	4	7	0	1	5	4	1	1	2	1	2	2	1	3	1	1	0	0	3	0	3	1	5	0			
Oct	7	9	5	4	7	2	9	3	5	1	4	3	1	2	4	2	0	2	2	4	1	1	0	0	2	0	1	2	1	8

BEAVER

Apr	362214 8 711 5 4 8 7 2 2 5 3 2 2 0 0 0 1 0 0 0 0 0 1 0 0 0 0
May	1615 81510 8 7 5 4 6 7 6 2 4 3 1 4 1 2 2 4 0 1 3 0 1 1 0 1 0 2
June	2718231512 9 913 510 6 3 1 3 1 3 2 1 0 2 1 2 0 1 2 0 0 1 0 1 0
July	302616201211 8 812 4 4 6 6 3 1 2 0 1 0 0 2 2 4 0 1 0 0 1 0 0 0
Aug	39262210161312 5 5 3 6 3 5 3 5 1 1 1 2 1 0 1 0 2 0 0 0 0 1 2
Sept	282515 911 5 6 5 7 3 4 7 2 1 2 1 0 0 1 3 0 1 3 1 0 1 0 0 0 1 0
Oct	1515 6 3 5 9 3 3 8 2 1 3 2 9 1 3 1 1 2 0 2 0 0 1 0 0 0 0 0 0

FIARVIEW

Apr	292010 9 5 6 4 6 4 0 3 3 2 0 2 0 0 0 2 0 0 2 0 0 0 0 0 0 0
May	6 91311 7 9 6 2 6 3 4 4 3 2 1 1 1 0 0 2 0 1 1 2 0 1 2 3 0 1
June	181513131110 4 3 6 4 8 4 3 0 3 0 1 0 2 0 1 4 1 0 0 0 0 0 1 0
July	35231814 6 7 6 3 5 2 3 2 3 4 0 2 2 1 0 2 1 0 1 1 0 1 0 0 1 1
Aug	2020161014 614 6 3 7 2 2 2 2 2 2 0 1 1 0 0 0 0 0 0 2 0 1 1 1
Sept	131311 6 5 4 3 3 8 2 1 4 3 1 3 1 1 0 2 0 0 2 1 2 0 1 0 0 0 1 0
Oct	12 9 7 5 5 2 4 2 2 1 2 2 1 1 0 1 3 1 0 0 2 0 1 1 0 0 0 0 0 1

Table 24 Number of Years With n Bad Days per Month (Sandy Soils)

[illegible]

5.2 Persistence of Good and Bad Days

Using the information pertaining to the frequency of runs of n bad days, and of n good days, an estimate of the average number of bad and good days was made for each month. Knowing the average number of bad and good days, it was then possible to determine the probability of a day being either good or bad in any given month. The probability of a day being good or bad varies depending upon the previous day's weather.

In order to examine this aspect more closely the month of May at Edmonton may be considered. Over a period of 45 years, 1922 - 1965 there was an estimated total of 363 bad days in medium to heavy soil. This means that the general probability of a bad day is 0.262. If the probability of a day being bad is designated as p , and the probability of a day being good is designated as q , then the probability that a day begins a run of bad days is pq . If the chance of the following day being bad is also p , then the probability of a run of at least two days is qp^2 , of at least three days qp^3 , etc. providing there is no "persistence". That is, if the probability of a day being bad is not greater than p when the previous day was also bad. The total number of days is 1395, hence the expected number of runs pqN is $(1395) (0.262) (0.738) = 270$. The expected number of runs of at least two bad days is $(270) (0.262) = 70.6$, of at least

three bad days $(70.6) (0.262) = 18.5$ and so on. These values are given in the first line of Table 25. The second line indicates the number of runs of exactly n bad days which is found by subtracting successive values in line one. The third line indicates the observed number of runs of n bad days.

Table 25. Frequency of Runs of Bad Days at Edmonton in May, 1922 - 1965

<u>n</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
Runs of n or more days	270.	70.6	18.5	4.8	1.3	0.3	0.1	0.0	0.0	0.0
Runs of n days	199.4	52.1	13.7	3.5	1.0	0.2	0.1	0.0	0.0	0.0
Observed runs	43.0	16.0	12.0	11.0	9.0	4.0	7.0	7.0	3.0	1.0

It would appear that there are too many one day runs, and too few longer runs suggesting possible persistence.

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Brooks and Carruthers examined persistence of rainy days at Kew, and suggest that there are three possibilities concerning persistence probabilities.

- i the probability of rain on a day following a rainy day is constant (i.e. $p_k = p_1$ for all values of k)
- ii the probability of rain after two rainy days is constant (i.e. $p_k = p_2$ for all values of k greater than 1)
- iii p_k continually increases as k increases.

Consider the first possibility first. The frequency of observed runs of 1, 2, 3,, n or more days is

$113 (1, p_1, p_1^2, \dots, p_1^n)$ the sum of which is $113/(1 - p_1)$. This sum may be equated to the observed number of bad days 363 yielding $p_1 = 0.688$. The calculated series of runs of n days can now be seen in Table 29.

Table 26 Frequency of Runs of n Bad Days at Edmonton

n	1	2	3	4	5	6	7	8	9	10
Runs of n or more days	113.0	78.0	53.8	37.1	25.6	17.6	12.2	8.4	5.8	4.0
Runs of n days	35.0	24.2	16.7	11.5	8.0	5.4	3.8	2.6	1.8	1.2
Observed runs	43.0	16.0	12.0	11.0	9.0	4.0	7.0	7.0	3.0	1.0

The calculated frequencies are now much closer to the observed frequencies. In fact, a Chi-Square test with five degrees of freedom ($\chi^2 = 7.17$) indicates that a worse fit will occur due to chance alone 22 times out of 100. A fit as good as this makes it unnecessary to check other possible probability theories. However as a matter of interest p_2 was calculated and found to be 0.395. A Chi Square test ($\chi^2 = 2.74$) when allowing for the one less degree of freedom does improve the fit.

The probability of a bad day, given that the previous day was good, and the probability of a bad day, given that the previous day was bad, was calculated for each month at each station. This was also done for good days. These results are summarized in Tables 27 - 30. The probabilities

Table 27 Probability of a Bad Day (Medium to Heavy Soil)

	<u>Apr</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>
Med Hat	.49(.83)	.20(.64)	.23(.55)	.12(.37)	.14(.51)	.29(.78)	.36(.87)
Leth	.55(.83)	.26(.69)	.28(.62)	.13(.45)	.14(.47)	.32(.79)	.43(.87)
Calg	.64(.86)	.29(.69)	.35(.70)	.20(.54)	.22(.55)	.36(.79)	.51(.90)
Edm	.65(.90)	.26(.69)	.30(.63)	.31(.57)	.32(.62)	.42(.84)	.59(.91)
Verm	.72(.90)	.22(.66)	.27(.66)	.24(.51)	.30(.62)	.46(.86)	.59(.92)
Beaver	.84(.95)	.25(.68)	.23(.57)	.24(.60)	.29(.65)	.54(.88)	.86(.95)
Fair	.85(.95)	.23(.67)	.25(.62)	.25(.57)	.29(.65)	.50(.87)	.84(.94)

Table 28 Probability of a Good Day (Medium to Heavy Soil)

	<u>Apr</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>
Med Hat	.51(.85)	.80(.89)	.77(.85)	.88(.89)	.86(.89)	.71(.89)	.64(.92)
Leth	.45(.82)	.74(.87)	.72(.83)	.87(.89)	.86(.89)	.68(.88)	.57(.90)
Calg	.36(.79)	.71(.86)	.65(.82)	.80(.86)	.78(.86)	.64(.86)	.49(.90)
Edm	.35(.84)	.74(.87)	.70(.83)	.69(.80)	.68(.80)	.58(.88)	.41(.89)
Verm	.28(.79)	.78(.89)	.73(.85)	.76(.82)	.70(.82)	.54(.89)	.41(.91)
Beaver	.16(.81)	.75(.86)	.77(.85)	.76(.85)	.71(.84)	.46(.86)	.14(.85)
Fair	.14(.81)	.77(.89)	.75(.85)	.75(.84)	.71(.84)	.50(.88)	.16(.84)

Table 29 Probability of a Bad Day (Sandy Soil)

	<u>Apr</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>
Med Hat	.30(.62)	.12(.36)	.16(.32)	.10(.23)	.10(.29)	.17(.58)	.21(.75)
Leth	.37(.68)	.17(.48)	.20(.44)	.11(.34)	.11(.29)	.19(.58)	.22(.70)
Cals	.41(.68)	.18(.45)	.24(.50)	.16(.38)	.17(.37)	.22(.58)	.26(.74)
Edm	.41(.72)	.15(.44)	.20(.40)	.23(.35)	.23(.43)	.26(.69)	.34(.81)
Verm	.46(.74)	.13(.42)	.19(.42)	.18(.32)	.21(.43)	.23(.65)	.26(.76)
Beaver	.46(.76)	.15(.44)	.16(.39)	.19(.43)	.20(.45)	.35(.72)	.50(.86)
Fair	.48(.77)	.14(.46)	.18(.43)	.19(.38)	.20(.46)	.33(.74)	.57(.87)

Table 30 Probability of a Good Day (Sandy Soil)

	<u>Apr</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>
Med Hat	.70(.83)	.88(.88)	.84(.84)	.90(.89)	.90(.89)	.83(.88)	.79(.92)
Leth	.63(.82)	.83(.87)	.80(.83)	.89(.89)	.89(.89)	.81(.87)	.78(.89)
Cals	.59(.78)	.82(.86)	.76(.80)	.84(.86)	.83(.84)	.78(.96)	.74(.89)
Edm	.59(.82)	.85(.88)	.80(.83)	.77(.79)	.7 (.80)	.74(.86)	.61(.89)
Verm	.54(.79)	.87(.89)	.81(.84)	.82(.82)	.79(.82)	.77(.88)	.74(.91)
Beaver	.54(.81)	.85(.88)	.84(.85)	.81(.84)	.80(.83)	.65(.84)	.50(.86)
Fair	.52(.80)	.86(.89)	.82(.85)	.81(.83)	.80(.84)	.67(.87)	.43(.86)

in parentheses indicate the probability of a bad day, given that the previous day was bad, and the probability of a good day, given that the previous day was good, respectively.

Except for the months of April, September, and October a Chi Square test indicated a good fit when the probability of a bad day was assumed to be p_1 . In total there were fifteen instances for which the Chi Square test indicated a poor fit at the 5% level. At the 1% level, the Chi Square test indicated a good fit for eight of the fifteen. It seems reasonable then, to assume that the probability of a bad day is constant after having one bad day. This was also the case with good days.

If one wishes to simulate a month's weather, he must make some allowance for persistence of weather. In the month of May at Edmonton for example, the first day may be classified as a work day or a non-work day on the basis of the general probability 0.26 for a bad day, and 0.74 for a good day. However, having classified the day one way or the other, the general probabilities 0.26 and 0.74 are no longer valid. Instead, if for example the first day was bad, the probability of May 2 being bad is p_1 or 0.69. The probability of May 2 being good is $1.0 - 0.69 = 0.31$. If May 2 is good then the probability of May 3 being good is 0.87. The probability of May 3 being bad is $1.0 - 0.87 = 0.13$.

The probabilities p and p_1 can be used to estimate the

theoretical length of run of bad days assuming no persistence and assuming persistence respectively. Assuming no persistence, the length of run would be $1/(1-p) = 1/(1.0 - 0.26) = 1.35$ days. Assuming persistence does occur, the theoretical length of run of bad days would be $1/(1-p_1) = 1/(1.0 - 0.69) = 3.22$ days.

Persistence of work and non-work days was found to occur regardless of the method used for classifying days as work or non-work days. Hence the need for making allowance for persistence of weather events is clearly pointed out.

5.3 Attempted Checks on Program Accuracy

Since the relationship between soil moisture content and soil tractability has not been well established, it was desirable to have some assurance that the estimates of good and bad days were as accurate as the Soil Moisture Budget. Two methods were used to check the results. The first type of check involved a comparison between observed and estimated working days when precipitation was known. In the second check the working days were known, but precipitation was not, hence a direct comparison could not be made.

The first type of check was limited to some extent, in that only one year's data were available for two stations. One station was located at Rutledge Ranching Co., Monitor, Alberta, and the second station was located at Liliham Farms Ltd., Penhold, Alberta. At Monitor a record was kept of

precipitation, as well as any field operation in progress on a daily basis (Appendix 8.2.1). At Penhold a record of precipitation was kept, and an estimate was made as to whether the soil was dry enough to permit field operations (Appendix 8.2.2). The soil at Monitor was a sandy loam, whereas the soil at Penhold was a silt loam. Using the first method of estimating bad days, that is using moisture criteria of 99.5% of capacity in the top three moisture zones, the number of bad days were underestimated by about one day for one inch rainfalls, and by two to three days for two inch rainfalls. Using the second method of estimating bad days, that is using moisture criteria of 95% of capacity in the top three zones, at Monitor a one inch rainfall caused the number of bad days to be overestimated by one to two days. At Penhold the number of bad days were underestimated about the same number of times as they were overestimated.

The results of this check can be explained by examining the soils. At Monitor the soil was a sandy loam, hence a criteria designed for finer textured soils would overestimate the number of bad days. The soil at Penhold was finer textured and estimates of bad days were closer. Although the results of one year's data are obviously inconclusive, the accuracy of the program appears to be fairly good.

The second check was made possible as the result of a coincidental conversation with Mr. Don Matthews, owner of

the Highland Stock Farm, located about ten miles west of Calgary on the south side of the Elbow River. Mr. Matthews has kept a diary²⁶ of farm operations for a number of years, and was kind enough to make the diary available for purposes of checking the method used in estimating work days. A fairly complete record of field operations was obtained for the years 1944 - 1966. Although the amount of precipitation is not generally recorded, interruptions in field work due to rainfall were noted. These records provided an alternative method of estimating good and bad days.

Although the farm is located only ten miles from the city limits, it is located twenty miles from the Calgary weather station. The distance involved made it impossible to assume identical precipitation at the two locations. It is possible however, that over a period of twenty-three years the differences in precipitation would average out. If this is in fact true, then the probability of a bad day at one station should be approximately the same as the probability of a bad day at the other station.

Two methods were used in determining the probability of a bad day in some months. Using the first method, if tillage operations were in progress, or if it appeared that tillage operations could have been carried out the day was classed as good. If field operations were stopped because of rain, or if it appeared that it was too wet to work a

day was classed as bad. However in some instances it rained when no tillage operations were in progress, hence a second estimate was made by considering only the days when tillage operations were in progress, and the days when tillage operations appeared to be stopped due to rain. The probabilities using these two methods, as well as the probabilities determined for medium to heavy, and sandy soil at Calgary are given in Table 31.

Table 31 Probability of a Bad Day - check results

		<u>Apr</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>
Matthews	1	.79	.26	.21	.10	.12	.17	.22
Matthews	2	-	-	.29	.14	.22	-	-
Calgary (heavy)		.64	.29	.35	.20	.22	.36	.51
Calgary (sandy)		.41	.18	.24	.16	.17	.22	.26

6 CONCLUSION

The object of this study was to examine the daily weather, with a view to establishing the number of days available in each month for tillage operations. Criteria were developed to classify a day as a work day or a non-work day. Using these criteria and several year's weather data, the probabilities of a good and of a bad day were determined on a monthly basis for seven Alberta stations.

One obvious conclusion that can be drawn from the results is that persistence of weather events, a phenomenon¹¹ observed by Brooks and Carruthers¹¹, creates persistence of work days, or non-work days as the case may be. This means that the probability of a day being either a work day, or a non-work day can not be established objectively, without some knowledge of conditions existing on the previous day. That is, the probability of a day being bad when the previous day was good, is not the same as the probability of a bad day when the previous day was also bad. Similarly, the probability of a good day is dependent upon the conditions of the previous day. This, of course lengthens the runs of good and bad days.

The probability values determined using criteria of 99.5% of moisture capacity in the top three moisture zones yielded almost the same values as those determined using criteria of 95% of moisture capacity in the top two zones except in the months in which snow was a factor. This may

be explained in two ways. In the case of a large rainfall, the top two zones are dried below 95% of capacity by the time the third zone is dried to 99.5% of capacity. In the case of smaller rains that do not affect the third zone, it does not make a great deal of difference whether 95% or 99.5% is chosen as criteria, since the time required to reach either moisture content is quite short.

Since tillage operations may be performed in coarse textured soils at moisture contents near field capacity without harm to soil structure, the probabilities estimated using either method should satisfactorily reflect real conditions. In finer textured soils tillage at high moisture contents is harmful to soil structure, and the second method must be used. That is, tillage operations are not performed until moisture content is below 95% of capacity in the top three moisture zones. The probability of a bad day estimated on this basis may in fact still be conservative, however on the basis of physical ability to pull a tillage implement, the estimates made using a criterion of 95% in the top three zones, appear to be in the right neighborhood. Caution must however, be exercised when using these probabilities for fine textured soils, like Malmo silty clay for example.

Although the probabilities determined here may not be the best under all soil and topography conditions, they do help quantify variables of great significance in the

scientific business of farming today. Improvements in the estimated probabilities for tillage operations as well as the establishment of probability values for harvesting operations will no doubt provide the farmer with a better guide to correct machinery sizing.

7 BIBLIOGRAPHY

1.Agricultural Machinery Administration, Test Reports, Province of Saskatchewan, Department of Agriculture, Regina, Saskatchewan.
2. Anderson, A.W., "The Application of Linear Programming", Thesis presented for M. Sc., University of Alberta, Edmonton, Alberta, December, 1965.
3. Baier, W., "Recent Advancements in the Use of Standard Climatic Data for Estimating Soil Moisture", Annals of Arid Zone, Vol. 6, No. 1, March, 1967.
4. Baier, W. and Robertson, G.W., "A New Versatile Soil Moisture Budget", Can. J. Plant Sci., Vol. 46, May, 1966.
5. Baier, W. and Roberson, G.W., "Estimation of Latent Evaporation from Simple Weather Observations", Can. J. Plant Sci., Vol. 45, 1965.
6. Baier, W. and Robertson, G.W., "The Performancy of Soil Moisture Estimates as Compared with the Direct Use of Climatological Data for Estimating Crop Yields", Agricultural Meteorology, Feb., 1967.
7. Berger, E.L., Liljedahl, J.B., Carleton, W.M. and McKibben, E.G., Tractors and Their Power Units, John Wiley & Sons, Inc., New York, Second Edition, 1963.
8. Baver, L.D., Soil Physics, John Wiley & Sons, Inc., New York, Third Edition, 1956.
9. Bekker, M.G., Off-The-Road Locomotion, the University of Michigan Press, Ann Arbor, Michigan, 1960.
10. Bekker, M.G., Theory of Land Locomotion, The University of Michigan Press, Ann Arbor, Michigan, 1956.
11. Brooks, C.E.P. and Carruthers, W., Handbook of Statistical Methods in Meteorology, Her Majesty's Stationary Office, London, 1953.
12. Browning, G.M., "Principles of Soil Physics in Relation to Tillage", Agr. En., Vol. 31, July, 1950, p. 341 - 344.
13. Buckman, H.O. and Brady, N.C., The Nature and Properties of Soil, The MacMillan Company, New York, Sixth Edition, 1964.

14. Carder, A.C. and Hennig, A.M.F., "Soil Moisture Regimes Under Summerfallow, Wheat and Red Fescue in the Upper Peace River Region", *Agricultural Meteorology*, Vol. 3, 1966, p. 311 - 331.
15. Chow, Ven Te, Handbook of Applied Hydrology, McGraw - Hill Book Company, New York, 1964.
16. Evans, Ivor, "The Measurement of the Surface Bearing Capacity of Soils in the Study of Earth Crossing Machinery", *Geotechnique*, Vol. 2, 1950, p. 46 - 57.
17. Fountaine, E.R. and Brown, W.J., "Shear Resistance of Top Soils Under Small Normal Loads", *J. Agr. En. Res.*, 1959, p. 53 - 58.
18. Friesen, O.H. and Domier, K.W., Traction Tests, Manitoba Department of Agriculture, Extension Service Branch and The University of Manitoba, Agricultural Engineering Department, 1967.
19. Halstead, M.H. and Covey, W., "Some Meteorologic Aspects of Evapotranspiration", *Proc. Soil Sci. Soc. Am.*, Vol 21, 1957, p. 461 - 464.
20. Hobbs, E.H. and Krogman, K.K., "A Comparison of Measured and Calculated Evapotranspiration for Alfalfa in Southern Alberta", *CSAE*, 1966.
21. Hobbs, E.H. and Krogman, K.K., "Evapotranspiration from Alfalfa as Related to Evaporation and Other Meteorological Variables", *Can. J. Plant Sci.*, Vol. 46, May, 1966, p. 271 - 277.
22. Holmes, R.M. and Robertson, G.W., "Conversion of Latent Evaporation to Potential Evapotranspiration", *Can. J. Plant Sci.*, Vol. 38, 1958, p. 164 - 172.
23. Janosi, Z., "Soil Values in Land Locomotion", *J. Agr. En. Res.*, Vol. 5, 1960, p. 19 - 27.
24. Krogman, K.K. and Hobbs, E.H., "Evapotranspiration by Irrigated Alfalfa as Related to Season and Growth Stage", *Can. J. Plant Sci.*, Vol. 45, July, 1965, p. 309 - 313.
25. Lignon, J.T., Benoit, G.R. and Elam, A.B., "Procedure for Estimating Soil Moisture Deficiency and Excess", T219 ASAE, 1965.

26. Matthews, D.C., Diary of Field Operations
- 27.....Monthly Records of Meteorological Observations in Canada, Department of Transport, Meteorological Branch, Toronto.
- 28.....Nebraska Tractor Tests, 1966, Dept. Ag. En., Univ. of Nebraska, Agricultural Experiment Station, Lincoln, Nebraska.
29. Nichols, M.L., "The Dynamic Properties of Soil, III Shear Values of Uncemented Soils", Agr. En. Vol. 13, p. 201-204.
30. Pelton, W.L., "Evaporation from Atometers and Pans", Can. J. Plant Sci., Vol. 44, 1964, p. 397 - 404.
31. Penman, H.L., "Natural Evaporation from Open Water, Bare Soil and Grass", Proc. Royal Soc. Ser. A, Vol 193, 1948, p. 120 - 145.
32. Pierce, L.T., "A Practical Method of Determining Evapotranspiration from Temperature and Rainfall", Trans. ASAE, 1960.
33. Pruitt, W.O., "Cyclic Relations Between Evapotranspiration and Radiation", T271, ASAE, 1964.
34. Reece, A.R., "Tractor Design and Tractive Performance", Paper No. 3/4/E/34, presented at the Ag. En. Symp. of the Instn. of Ag. En., Sept., 1967, National College of Ag. En., Silsoe, Bedford, England.
35. Richards, L.A., "The Usefulness of Capillary Potential to Soil Moisture and Plant Investigators", J. Agr. Res., Vol. 37, 1923, p. 719 - 742.
36. Richards, L.A., Gardner, W.R. and Gen Ogata, "Physical Process Determining Water Loss from the Soil", Soil Sci. Proc., 1956, p. 310-314.
37. Skempton, A.W. and Bishop, A.W., "The Measurement of the Shear Strength of Soils", Geotechnique, Vol. 2, 1950, p. 90 - 112.
38. Smithsonian Institute, "Smithsonian Meteorologic Tables", Sixth Edition, Washington D.C.

39. Robertson, J.A., Soil Characteristics, Determined by Averaging Several Years of Results Found by a First Years Soils Class", Unpublished data, Department of Soil Science, University of Alberta.
40. Sowers, J.B. and Sowers, G.F., Introductory Soil Mechanics and Foundations, The MacMillan Company, New York, 1956/
41. Staple, J.J. and Lehane, J.J., "The Conservation of Soil Moisture in Southern Saskatchewan", Sci Agr., Vol. 32, 1952, p. 36 - 47.
42. Thornthwaite, C.W., "An Approach Toward a Rational Classification of Climate", Geogr. Rev., Vol 38, 1948, p. 55 - 94.
- 43..... "A Limited Study of Factors That Affect Soil Shear Strength", Miscellaneous Paper No. 4-284, Aug., 1958, U.S. Army Engineer Waterways Experiment Station, Corps of Engineers, Vicksburg, Mississippi.
44. Van Nijk, J.B. and De Vries, D.A., "Evapotranspiration", Netherlands Journal of Agricultural Science", 1954, p. 105 - 117.
45. Wilcox, J.C., "Effect of Weather on Evaporation from Black Bellani Plates and Evapotranspiration from Lysimeters", Can. J. Plant Sci., Vol. 43, 1963, p. 1 - 11.
46. Hills, B.D.M., "The Measurement of Soil Shear Strength and Deformation Moduli and a Comparison of Actual and Theoretical Performance of a Family of Rigid Tracks", J. Ag. En. Res., 1963, p. 115 - 131.

8. APPENDICES

8.1 Listing of Work and Non - Work Days

8.1.1 Heavy to Medium Soils

In making this estimate of good and bad days, a day was classified as bad if the moisture content in either of the top three soil moisture zones was greater than 95% of the capacity of that respective zone, provided that there was no snow on the ground. It was assumed that if there was snow on the ground in the Spring of the year, the air temperature did not rise above 45°F. If there was snow on the ground in the Fall, it was assumed that the air temperature did not rise above 40°F. Hence, it was considered that there was snow on the ground in the Spring when temperatures did not exceed 45°F. during the day, and in the Fall when temperatures did not exceed 40°F.

The weather stations are:

Edmonton	2195 - 2208
Vermilion	6800
Calgary	1080 - 1100
Lethbridge	3880 - 3890
Medicine Hat	4480
Beaverlodge	560
Fairview	2520

STA'N MO. YR. X = GOOD DAY . = BAD DAY

2195	APR	1921	XXXXXXXXXXXXXXXXXXXXX
2195	MAY	1921	XXX.XXXXXX..XXXXXXXXXXXXXX..XXXX
2195	JUNE	1921	XXXX.X...X...XXX..XXXXXX.XXXX.
2195	JULY	1921	XXXXXXXXXX.XXXXXX.XXX....
2195	AUG	1921	X..X.XX...XXXXX.XXXXXXXXXXXXXX
2195	SEPT	1921	XXXXXX.....XXXXXXXXXXXXXXXXXX
2195	OCT	1921	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2195	APR	1922	XXXXXXXXXX
2195	MAY	1922	XXXXXXXXXX..XXXXXXXXXXXXXX.XXXXX
2195	JUNE	1922	XXXXX.XXXXXXXXXX.XXXXXXXXXXX..X
2195	JULY	1922	XX..XX.X.XXXXXXXXXXXXXX.XXXXXXXXX
2195	AUG	1922	XXXXX..XXXXX.....X....XXXXX.XXXX
2195	SEPT	1922	..XXXXXXXXXX.XXXXXXXXXXXXXXXXXXX
2195	OCT	1922	XXXXXXXXXXXXXX..XXXXXXXXXX.
2195	APR	1923	XXXXXXXXXXXXXX.
2195	MAY	1923	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX....X
2195	JUNE	1923	X...XXX.XXXXXXXXXX.....XXX
2195	JULY	1923	XX.....XXXXXXXXXX...XX..XXXXXXX
2195	AUG	1923	XXXX.....XXXXXXXXXX.XXX...XX..XX
2195	SEPT	1923	XXXXXXXXXXXXXXXXXXXXX.....
2195	OCT	1923	XXXXXXXXXXXXXXXXXX..XXXX...X...XX
2195	APR	1924	XXXX
2195	MAY	1924	XXX.XXXXXXXXXXXXXXXXXXXXXX..XXXX
2195	JUNE	1924	XXXXXXXXXXXXX.....X.XXXXXXXXXX.XX
2195	JULY	1924	XXXXX..XXXXXXXXX.....XX.XXX.....
2195	AUG	1924	XX.XXXXXX..XX.X.XXXXXXX....
2195	SEPT	1924	XXXXXXXXX.XXXXXXXXXXXXXXXXXXX.XXXXX
2195	OCT	1924	XX..XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..
2195	APR	1925	XXXX.XX.....XXX
2195	MAY	1925	X.XXXXXXXXXXXXXXXXXXXXXX..XXXXXX.X
2195	JUNE	1925	X.....XXXXXXXXXXXXXXXXXXXXX.XXXX.XX
2195	JULY	1925	..XXXXXXXXXXXXXXXXXXXXX.X.X.XXXXXX
2195	AUG	1925	XXXXX..XXX..XX.....XXX..XXXXXXXXX
2195	SEPT	1925	XXX.....XXXXXXXXXXXXX
2195	OCT	1925	XXX.....
2195	APR	1926	XXXXXXXXXXXXXXXXXXXXX
2195	MAY	1926	XXX.XX.XXXXXXXXXXXXXXXXXXX.XXXXX..
2195	JUNE	1926	..XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2195	JULY	1926	XXXXXXXXXX.XXXXXX..XXXXXXX.XX.X
2195	AUG	1926	...X.X.XX...X.XXXXXX...XXX...X..
2195	SEPT	1926	.....
2195	OCT	1926	.....
2195	APR	1927	XX....XXXX.XXX..
2195	MAY	1927	XXXXXXX.XXXXXXX.X..XXX
2195	JUNE	1927	XXXXXXXXXXXXXXXXXX.XX....XX....XX.
2195	JULY	1927	XX.....X.XXXXXX..XXXXXXXXXXXXX
2195	AUG	1927	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX...X
2195	SEPT	1927	XXXXX..XXXXX.....
2195	OCT	1927	.....
2195	APR	1928	XXXXXXX
2195	MAY	1928	XXXXXXXXXXXXXXXXXXXXX.XXXX....X

[illegible]

STA'N MO. YR. X = GOOD DAY . = BAD DAY

2195	JUNE	1928	XXXXXXXXXXXXXXXXX..XXXXXXXXX.XXXXXXX.
2195	JULY	1928	XXX...X..XXXXX..XXXXXXXXXXXXXXXXXXXXX
2195	AUG	1928	XXX...XXX.XXX.XXXXXXXXXXXXXXXXXXX.X
2195	SEPT	1928	XXXXX..XXXXXXXXXXXXX.XXXXXXXXXXXXXXX
2195	OCT	1928	X..XXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXX
2195	APR	1929	XXXXX
2195	MAY	1929	XXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXX
2195	JUNE	1929	XXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX..XXX
2195	JULY	1929	XXXXX..XX..XXXXXXXXXX.XXXXXXXXXXXXXX
2195	AUG	1929	XX..XXXXXX.XXXXXXXXXXX..X....XXXX.
2195	SEPT	1929	XXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXX
2195	OCT	1929	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..
2195	APR	1930	..XXXXXXXXXXXXX..XXXXX.XXXX.XXXXX
2195	MAY	1930	XXXXXXXXXXXXXXXXXXXXX.XX.....XXXXXX
2195	JUNE	1930	X.XXXXXXXXXX.....XXXXXXXXXX..XX
2195	JULY	1930	...XXXXXXXXXXXXX..X.XXXX.XXXXXXXXX
2195	AUG	1930	XXXXXXXXXXXXX.XXXXXXXXXXX..XXXXX..XXXXX
2195	SEPT	1930	XXXXX..XXX.XXXXXX.XX.....
2195	OCT	1930	XXXXXXXXX.....XX.....
2195	APR	1931	XXXXXXXXXXXXX.....XXXXXXXXXXXXX
2195	MAY	1931	XX..X.....XXXXX.....XXXXXXXXXX
2195	JUNE	1931	XXXXXXXXX.XX.XXXX.....X....XXXX.
2195	JULY	1931	..X..XXXXXX..XXXXXXXXXXXXXXXXX..X..
2195	AUG	1931	XX.....XX.XXXXXXXXXX.XXXX.....
2195	SEPT	1931	..XXXXX.XXXXXXXXXXXXXXXXXX.XXXXXXXXX
2195	OCT	1931	XXXXX.....
2195	APR	1932	XXXXX.....
2195	MAY	1932	XXXXXXXXXXXXXXXXXXXXX.....XX.
2195	JUNE	1932	XXXXXXXXXXXXXXXXXXXXX.XXXXXX.X
2195	JULY	1932	XXX.....XX.X....XXXXX.XXXXXX
2195	AUG	1932	XXXXXXXXXXXXX..XXXXXXXXXXXXXXXXX.XXXXXX
2195	SEPT	1932	XXXXXXXXXXXXXXXXXXXXX.....
2195	OCT	1932	XXXXXXXXXXXXX..XXX....XXXXXXXXX.....
2195	APR	1933	XXXXX.XXXX
2195	MAY	1933	XXX.....XXXXX.....XXXXXXXXXXXXX
2195	JUNE	1933	XXXXX..X.XXXXXXXXXXXXXXXXXX.....XX..
2195	JULY	1933	XX...XX.....XXXXXXXXXXXXXXXXXXXXX.X..
2195	AUG	1933	.X.XXXXXXXXXXXXXXXXXXXXXX..XXXXXXXXX.
2195	SEPT	1933	..XX..XXXXXXX.....
2195	OCT	1933	XXXXXXXXX..XXXXX.....
2195	APR	1934	XXXXXXXXXX...
2195	MAY	1934	XXXXXXXXXXXXX..X....XXXXXX..
2195	JUNE	1934	...XXXXX.XX.X.....XXXXX.....XXXX..
2195	JULY	1934	..X.XXXXXX.....XXXXX.XX.XXXXXXX.
2195	AUG	1934	XXXXX..XXX..XXXXXXX.X.XXXXXXX..
2195	SEPT	1934	..XXXXXXXXX.....
2195	OCT	1934	XXXXXX..XXXXXXXXXXXXXXXXXX
2195	APR	1935	.....
2195	MAY	1935	XXXXXXXXX.....X....XXXX
2195	JUNE	1935	..XXXXXX.XXXX.....X.XXXX..XXX.
2195	JULY	1935	.X.XXX.XXXXXXXXXX.XXXXXXXXXXXXXX.XX.

STA'N MO. YR. X = GOOD DAY . = BAD DAY

2195	AUG	1935	...X.XXXXXXXXXX..X....XXXX.XX.XXX
2195	SEPT	1935	XXXXXXXXXX.....XXXX
2195	OCT	1935	XXXXXX....XX.....
2195	APR	1936	X.....XX
2195	MAY	1936	XXXX.....XXXX.XXX...XXXXXXXXXX
2195	JUNE	1936	XXXXXXXXXXXXXXXXXX....XXXXXX.XXX.X
2195	JULY	1936	XX.XX.XXXXXXXXXXXXXXXXXX..XX.XXXXXX.
2195	AUG	1936	XXXXX.XXXXXX..X.XXXXX....XXXXXX
2195	SEPT	1936	XXXXX.XXXX....XXXXXX.XXXXXXX.X
2195	OCT	1936	XXXXXXXXXXXXXXXXXXXXX.....
2195	APR	1937	X.XXXXXX..XXXXXXXXXX
2195	MAY	1937	XXXX...X...XXXXXX..X.XXXXXXXXXXX
2195	JUNE	1937	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2195	JULY	1937	.XXX.XXXXXXXXXX....XXXXXX.XXXXX...
2195	AUG	1937	..XXXXXXXXXXXXX....XXXXX.XX.XXXXX
2200	SEPT	1937	XXXXXXXXXXXXXXXXXXXXX.....
2200	OCT	1937	.....
2200	APR	1938	XXXXXXXXXXXXX..XXXXXX
2200	MAY	1938	XXXXXXXXXXXXXXXXXXXXXXXXXXXX
2200	JUNE	1938	XXX.XXX.XXXXXXXXXX.XXXXXXXXXX....
2200	JULY	1938	XX...XX..X.XXXXX..XXXXXXXXXXXXX..
2200	AUG	1938	...XXX.....X.XXXXXXXXXX
2200	SEPT	1938	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2200	OCT	1938	XX...XXXXX....XXXXXXXXXXXXXXXXXX.
2200	APR	1939	XXXXXXXXXX
2200	MAY	1939	XXX.....XXXXX.....XXXXX.X
2200	JUNE	1939	XXX.....XXX.XXXXXXXXXXXXXX..XXXX
2200	JULY	1939	XXXXXXXXXXXXXXXXXXXXX....XXXXXXXXXXXX
2200	AUG	1939	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2200	SEPT	1939	XXXXXXXXXX.....XXXXXXX.....
2200	OCT	1939	.....
2200	APR	1940	XXX.....
2200	MAY	1940	.XXX...XXXXXXXXXXXXXXXXXXXXX....
2200	JUNE	1940	XXXXXXXXX..XXXXX.XXXXX....XX
2200	JULY	1940	XX.XXX.....X.....XXXX.XXXXXXXXXX
2200	AUG	1940	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXX
2200	SEPT	1940	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2200	OCT	1940	.....
2200	APR	1941	XXXXXX..XXXXXXXXXXXXXXXXXX
2200	MAY	1941	XXX.XX..XXXXXXXXXXXXXXXXXXXXXXXXXXXX
2200	JUNE	1941	XXXXXXXXXXXXXXXXXXXX.XX...X....XXXX
2200	JULY	1941	..XXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXX.XX
2200	AUG	1941	X.....XXXXXXXXXX....XXX.XXXXXXX..
2200	SEPT	1941	XXX.X.XXXXXXXXXXXXXX..XX.....XXX
2200	OCT	1941	X.....
2200	APR	1942	XXXXX..XXXX
2200	MAY	1942	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX....X
2200	JUNE	1942	XXXXXXXXXX....X.....XX..XXXXXX
2200	JULY	1942	XXXXXX..XX.XX.XX..XXXXXXXXXXXXXXXX
2200	AUG	1942	XXXXXXXXXXXXX....XXXXXXXXXXXXX....XX
2200	SEPT	1942	..XXXXXXXXXXXXX.....X

STATION	MO.	YR.	X = GOOD DAY	. = BAD DAY
2200	OCT	1942	XXXXXXXXXXXXXXXXXXXXXXXXXXXX	.....
2200	APR	1943	.....	XXXXXX.XXXXXXX
2200	MAY	1943	.XXXXXX.XXXXXX.XXXXXXXXXXXXXX	.XXX.
2200	JUNE	1943	..XXXXXXXXX..XXXXX.....	XXX
2200	JULY	1943	XXXXXX..XXX..XXXXX.XXX..	XXXXXX
2200	AUG	1943	XXXXXX..X.....X...XX...	XXXXX..
2200	SEPT	1943	XXX.XXXXXXXXXXXXXX.XXXXXXXXXXXXXX	
2200	OCT	1943	XXXXXXXXXXXX	.....
2200	APR	1944	.....	XXXXXXXXXXXXXXXXXXXXXXXXXXXX
2200	MAY	1944	..XXXXXX.....X.X.XXXXX..	XXXXXX.
2200	JUNE	1944	XXXXX.....	XXXXXXXXXXXXXX.
2200	JULY	1944	..XXX..XXXXX.XXXXXXXXXXXXXX	.XXX.....
2200	AUG	1944	.XXXXXXXXXXXXX.XXXXXXXXXXXXXX	X..XXX
2200	SEPT	1944	XXXXXXXXXXXXXXXXXXXX	.....
2200	OCT	1944	.....	XXXXXXXXXXXXXXXXXXXX.
2200	APR	1945	.....	XX.....
2200	MAY	1945	.XXXXXXXXXXXXXXXXXXXXXXXXXXXX	
2200	JUNE	1945	XXXXXXXXXXXXXX..XXXXXXX.XXX.	XX.
2200	JULY	1945	.XXX.XXXXXXXXXX..XXXXXXXXXXXX	.....
2200	AUG	1945	.X...XXXXXXXXXXXXX..XXXXX.X	.....
2200	SEPT	1945	.XXXXXX.XXXXXXXX.X	.....
2200	OCT	1945	.....	XXXXXXXXXXXXX.....
2200	APR	1946	.....	XXXXXXXXXXXXXX.XXXX
2200	MAY	1946	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXX	.XX
2200	JUNE	1946	XX...X.XXXXXX..XXXXXX.....	XX
2200	JULY	1946	XXX...XXXXXX.....	XXXXXXXXXXXXXX.XX
2200	AUG	1946	XXXXXX..XX.....XXXXXX..	XXXXXXXXXX
2200	SEPT	1946	XXX.....XXX..XXXXXX..XXX.	XXX
2200	OCT	1946	XXXXXXXXXXXXXXXXXX..XXXXXXXXXXXX	.XX
2200	APR	1947	.....	XXXXXX
2200	MAY	1947	XXXXXXXXXX..XXXXXXXXXXXXXXXXXX	
2200	JUNE	1947	XXXXX.....X.X.....	XXXXXXXXXXXXXX.X
2200	JULY	1947	X.XXXXXXXX..XXXXXXXXXXXXXX	XX...X
2200	AUG	1947	XX...X.XX.XXXXXX.XXX...	XX.XXX
2200	SEPT	1947	XXX.XX.....	
2200	OCT	1947	.....	
2200	APR	1948	.....	
2200	MAY	1948	.....	XXX..X.XXXXXXXXXXXXXXX
2200	JUNE	1948	.XXXXXX..XXXXXXXXXXXXXXXXXXXX	XXXXXX
2200	JULY	1948	XXXXXXXXXX.XXX..XXXXXXX.XXX.	XXXXX
2200	AUG	1948	XXXXXX..XXX..XXXXX.XXXXXXXXXXXXX	
2200	SEPT	1948	XXXXXXXXXXXXX.....XXXXX.	XXXXXX
2200	OCT	1948	XXXXXXXXXXXXXXXXXX..XXXXXXXXXXXX	
2200	APR	1949	.....	XXXXXXXXXXXXXX
2200	MAY	1949	XXXXXXXXXXXXXXXXXXXXXX	X
2200	JUNE	1949	XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXX
2200	JULY	1949	XXXXX.XXXXXXXXXX.....XX.....	X.X
2200	AUG	1949	X.XXXXX..XXXXXXXXXXXXXX..	XXXXXXXXXX
2200	SEPT	1949	XXXXXXXXXXXXXXXXXXXX..XXXXXXXXXXXX	
2200	OCT	1949	XXXXXX..XXXXXXXXXX..XX.....	XX..XX
2200	APR	1950	.....	XXXXXXXXXXXXXX

STATION	MO.	YR.	X = GOOD DAY . = BAD DAY
2200	MAY	1950	XXXX.XXXXXXXXXXXXXX.XXXXXXXXXXXXXX
2200	JUNE	1950	XXX.....XXXXXXXXXXXXXXXXXXXXXXX.X
2200	JULY	1950	XXXXXXXXXX...X...XXXXXXXXXXXXXXX.XXX
2200	AUG	1950	X..XX.....XXXXXXXXXXXXXXXXXXXXXX
2200	SEPT	1950	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..
2200	OCT	1950	.....
2200	APR	1951	XXX.
2200	MAY	1951	XXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXX
2200	JUNE	1951	XXXXXXXXX.XXXXXXXXXXXXXX...XXXXXX
2200	JULY	1951	XXXXX..X.XXX..XX...XXX..XXXXX..
2200	AUG	1951	.XX...XX...XXXXXXXXXXXXXXX..X....
2200	SEPT	1951	...XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.....
2200	OCT	1951	XXXXX.....
2200	APR	1952	XXXXXXXXXXXXXXXXXXXXXXX
2200	MAY	1952	XXX.....XXXXXXXXXXXXXXX..XX.XXXXXXX
2200	JUNE	1952	XXXXXXXXXXXX...XXXXX.....XXX..
2200	JULY	1952	XXXXX.XXXXXXXXXXXXXX.XX...XXXXXXXXXX
2200	AUG	1952	X..XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXX..
2200	SEPT	1952	.X.....XXXXXXXXXXXXX
2200	OCT	1952	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXX...XXX
2200	APR	1953	X.XXXXXXX.
2200	MAY	1953	XXX.....XXXXXXXXXXXXXXXXXXXXXXX
2200	JUNE	1953	..XXXXX.XXXXXX.XX.....X...X..
2200	JULY	1953	X.....XXXXXXXXXX.XX.X.XX...XXXXXX..
2200	AUG	1953	XXX.....XXXXXXXXXXXXX...XX.X
2200	SEPT	1953	XXXXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXX
2200	OCT	1953	XXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXX..
2200	APR	1954	.....
2200	MAY	1954	...XXXXX.X.....XXXXX.....XXX
2200	JUNE	1954	XXX.....XXXXXXXXXX.XXXXXXXXXXXXXX
2200	JULY	1954	XXXXXXXX..X..XX..X.XXXXXXXXXX...X
2200	AUG	1954	X.....XX...XXXXXX...XXX.....X.
2200	SEPT	1954	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2200	OCT	1954	X...XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.....
2200	APR	1955	XXXXX..XXX.....
2200	MAY	1955	...XXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXX
2200	JUNE	1955	XXXXXXXXXXXXXXXXXXXXX.XX.X..XXXXXXXXXX
2200	JULY	1955	X.....XXXXXXXXXXXXXXXXXXXXX...X..X
2200	AUG	1955	XXX.XXXXXXXXXXXXXX.XXXXXXXXXXXXXX
2200	SEPT	1955	XXXXXX.XXXXXXXX.....
2200	OCT	1955	.....
2200	APR	1956	XX.....
2200	MAY	1956	...XXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXX
2200	JUNE	1956	.XX..XXXXXXXXXX...XXXXX..XX..
2200	JULY	1956	..XXX..X.XXXXXXXXXXXXXX.....XX
2200	AUG	1956	XX...XXXXXXXXXX...XXXXXXXXXX.XXXX
2200	SEPT	1956	XXXXXXXXXXXXX.....
2200	OCT	1956	.....
2200	APR	1957	XXXXX.....XXX
2200	MAY	1957	XXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXX
2200	JUNE	1957	XXXXXX..XXXXXXXXXXXXX..XXXXXXXXXXXXX

STA'N MO. YR. X = GOOD DAY . = BAD DAY

2200	JULY	1957	XXXXX.XXXXXXXXXXXXXX.XXXXX.XXX.X
2200	AUG	1957	...XXXXX.....XXXXXXXXXX.....XX
2200	SEPT	1957	XXXXXXXX.XXXX.XXXXXXXXXXXXXXXXXXXXX
2200	OCT	1957	X.....
2200	APR	1958	XXXXXXXXXX..XX.XXX
2200	MAY	1958	..XXXXXXXXXXXXXXXXXXXXX.XXXXXXX.X
2200	JUNE	1958	...XXXXXXXXXXXXXXXXXXXXXXXXXXXXX....
2200	JULY	1958	.XXXXXXXXX..XXXXXXXXXX..XX..XXXXX
2200	AUG	1958	XX...XX..XXXXXXXXXXXXXXXXXXXXX....X
2200	SEPT	1958	XXXXXXXXXXXXX.....
2200	OCT	1958	.....
2200	APR	1959	XXXXXXXXXX....XXXXXX
2200	MAY	1959	X.....XXXXXXXXXX.XXXXXXX
2200	JUNE	1959	XXXXXXXXXX.XXXXXX...X.X....XXXX
2200	JULY	1959	XXX..XXXXXXXXXXXXX.XXXXXX...XX
2200	AUG	1959	..X.XX.X...X.....XXXXX...XXX
2200	SEPT	1959	XXXXXXXXX.....
2200	OCT	1959	.....
2200	APR	1960	XXXXXX..XXXXXX
2200	MAY	1960	XX..XXXXXXXXX.....XXXXXX...XX
2200	JUNE	1960	XX.XXXXXXXXXXXXXXXXXXXXXX....X
2200	JULY	1960	XXXXXX.XXXXXXXXXXX....XXXXXX
2200	AUG	1960	XXX...XXXXXX.XXXXXX...XXXXXXXXXX
2200	SEPT	1960	XXX.X.....XXXXXXXXXX.....
2200	OCT	1960	.....
2200	APR	1961	XX
2200	MAY	1961	XXXXX.....XXXXXXXXXXXXXXXXXXXXX.XXXX
2200	JUNE	1961	XXXXXXXXXXXXX.XXXXXXXXXXXXXX...XX..
2200	JULY	1961	...XXXXXXXXXXXXX..XXXXX.....
2200	AUG	1961	XXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXX
2200	SEPT	1961	XX.XXXXXXXXXXXXXXXXXX.XXX.....
2200	OCT	1961	.XXX...XX..XXXXXX.....
2205	APR	1963	.XXX.....XX.....XXXXXX
2205	MAY	1963	X.....XXXXXXXXXXXXXXXXXXXXX.XXXXXX
2205	JUNE	1963	XXXXXXXXXXXXXXXXXXXXX..XX..XXXX
2205	JULY	1963	XXXXXXXXX.....XX..XX.XXXX.XXXXXX
2205	AUG	1963	XXXXXXXXXXXXXXXXXXXXX..XXXXXX....XXXX
2205	SEPT	1963	XXXXXXXXXX.XX.....XXXXXXXXXX
2205	OCT	1963	XXXXX.XXXXXXXXXXXXXX.XXXXXXXXXXXXXX
2205	APR	1964	X.X.XXX.XXXX
2205	MAY	1964	XX.....XXXXXXXXXXXXX.XXXXXXXXXX
2205	JUNE	1964	XXXXXXXXXXXXXXXXXX.XXXX.XXXXX.XXXXX.
2205	JULY	1964	XX..XXXXX.XXXXXXX.XX.XXX.XXX.....
2205	AUG	1964	XXXXX.XXX..XX.XXXXXXXXXXX.X.XX....
2205	SEPT	1964	X.....
2205	OCT	1964	XXXXXXXXXXXXX....XXX
2205	APR	1965	XXX.XX
2205	MAY	1965	XXXXXXXXXXXXXXXXXXXXX..XXXXX....XX..
2205	JUNE	1965	XXXXX.XXXX....XXXXX.....
2205	JULY	1965	XXXXXX.X.....X.X..XXX..XXXXXXXXX
2205	AUG	1965	XXXXXXXXXX..XX..XXXXXXXXXXXXX.....

STA'N MO. YR. X = GOOD DAY . = BAD DAY

2205	SEPT	1965	.XX..XXXX.....
2205	OCT	1965	XXXXXXXXXX
2208	APR	1962	.XXXX.....XXXXXXXXXXXXXXXXXX....
2208	MAY	1962	XXXXXXXXXX..XXXXXXXXXXXXXXXXX.
2208	JUNE	1962	X.....XX..XXXXXXXXXXXXXXXXXX
2208	JULY	1962	XXXXXXXXXX.XX.....XXX.XX.XXX
2208	AUG	1962	XXX...X.X.XXXXXXXXXXX.X.X.XX.....
2208	SEPT	1962	..XXX..XXX.....XXXXXXXXXXXX
2208	OCT	1962	XXXXXXXXXXXXX.....XXXX.....XXXXXX
6800	APR	1947	XXX.X..XXX.X...XXXXXXXXXX
6800	MAY	1947	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXX
6800	JUNE	1947	XXXXX.XXXXXXXXXX...XXXXXXXXXXXXXXXXXX
6800	JULY	1947	X.X.XX.X...XXXXXXXXXXXXXXXXXXXXX.XX
6800	AUG	1947	XXX.XXXXXXXXXXXXXX...X.....XXXXXX
6800	SEPT	1947	XXXXXXX.....
6800	OCT	1947	.....
6800	APR	1948	.....
6800	MAY	1948	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
6800	JUNE	1948	XXXXXX.XXXXXXX.XXXXXX..X..XXXX
6800	JULY	1948	.XXXXXXXXXXXXX...XXXXXXXXXX..XXXXXX
6800	AUG	1948	XXXXXXXXXXXXX...XXXXXXXXXX.XXXXXXXXXX
6800	SEPT	1948	XXXXXXXXXXXXX.....XXXX.....
6800	OCT	1948	..XX.XXXXXXXXXXX..XXXXXXXXXXXXXXXXXX
6800	APR	1949	XXXXXXXXXXXXX..XXXXXXXXXX
6800	MAY	1949	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXX..
6800	JUNE	1949	..XXXXXXXXXXXXXXXXXXXXXXXXXXXXX...XXX.
6800	JULY	1949	.XXXXX.XXXXXXXXXXX.X.....XXXX
6800	AUG	1949	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XX.XXXXXX
6800	SEPT	1949	XXXXXXXXXXXXXXXXXXXXX.....XXXXXXX
6800	OCT	1949	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX...XXXXXX
6800	APR	1950	XXXXXX
6800	MAY	1950	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXX
6800	JUNE	1950	XXX.....XXXXXXXXXXXXXXXXX...XXXXXX
6800	JULY	1950	XXXXXXXXXXXXXXXXXXXXX...X.XXXXXXXXXX..X
6800	AUG	1950	X.XXXXXXX..X.XXXXXXXXXXXXXXXXXXXXXX
6800	SEPT	1950	XXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX.....
6800	OCT	1950	.....
6800	APR	1951	XX..
6800	MAY	1951	XXXXXXXXX.....XX.XXXXXX.....
6800	JUNE	1951	XXXXXXXXXXXXXXXXXXXXX..XXXXXX.X
6800	JULY	1951	XXXXX..XXXXXXX.....XXXXXX.X..
6800	AUG	1951	.XXXXXX.X...XXXXXXXXXXXXXXXXXXXXX.X..
6800	SEPT	1951	...XXXXXXXXXX.XXXXXXXXXX.....
6800	OCT	1951	XXXXX.....
6800	APR	1952	XXXXXX.XXXXXXXXXXXXX
6800	MAY	1952	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXX..XXXXX
6800	JUNE	1952	XXXXXXXXXXXXX.....XXXXX..XXXXX..
6800	JULY	1952	XXX...XXXXX.XX..XXXXX..XX..XXXXX
6800	AUG	1952	..X.XXXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXX
6800	SEPT	1952	XX.....XXXXXXXXXXXXX
6800	OCT	1952	XXXXXXXXXXXXX.....XXXXXXXXXX..XXXX

STA 'N	MO.	YR.	X = GOOD DAY	. = BAD DAY
6800	APR	1953	XXXXXX..	
6800	MAY	1953	XXXXX.XXXXXXXXXXXXXXXXXXXXXX	
6800	JUNE	1953	XXXXXXXXXX.....X.....X.....	
6800	JULY	1953	.XXXXXXXXXXXXX.XX...XX...X...X..	
6800	AUG	1953	...XXXXX.....XXXXXXXXXX.....XXX	
6800	SEPT	1953	.XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXX	
6800	OCT	1953	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX...	
6800	APR	1954	.....	
6800	MAY	1954	XXXXXXXXX.....XXXXX.....X....XX	
6800	JUNE	1954	X.X.....X...XX.XXXXXXXXX.XXXX	
6800	JULY	1954	XXXXXXXXXX.XXXX..XXXXXXXXXXXXX..XXX	
6800	AUG	1954	X...XXXXXXXXX..XXXXX.....X.	
6800	SEPT	1954	..XXXXXXXXXX.....XXXXX..	
6800	OCT	1954	X...XXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
6800	APR	1955	XXXXXXXXX.....	
6800	MAY	1955	..XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
6800	JUNE	1955	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXX..	
6800	JULY	1955	XXXXXXXXXXXXXXXXXXXXX..XXXXX	
6800	AUG	1955	XXXXXXXXXXXXXXXXXXXXX..XXXXX.XXXXXXX	
6800	SEPT	1955	XXXXXXXXXXXXXXXXXX.....	
6800	OCT	1955	.....	
6800	APR	1956	.....	
6800	MAY	1956	...XXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
6800	JUNE	1956	XXXXXXXXXXXXXXXXXXXXX...XX.....	
6800	JULY	1956	.XXX...XXX...XXXXXXXXXXXXX.XXXXXX	
6800	AUG	1956	.X...XXXXXXXXXXXXX..XXXXXXXXXX..XX	
6800	SEPT	1956	XXXXXXXXXXXXX.....	
6800	OCT	1956	.....	
6800	APR	1957	XXXXXXXXX....XXX	
6800	MAY	1957	XXXXX...XXXXXXXXX.XXXXXXXXXXXXXX	
6800	JUNE	1957	XXXXXXXXXXXXXXXXXXXXX.XXX..	
6800	JULY	1957	...XX..XXXXXXXXXXXXX.XXX..XXXXX.XXXX	
6800	AUG	1957	XXXXX..XX.....XXXXX..XX.....X.	
6800	SEPT	1957	XXXXXXXXXXXXX.....	
6800	OCT	1957	X.....	
6800	APR	1958	XXXXXXXXXXXXX.XXX	
6800	MAY	1958	XXXXXXXXXXXXXXXXXXXXX.XXXXXX	
6800	JUNE	1958	XXXXXXXXXX.XXXXXX.XXXX.XXXXXXXXXX	
6800	JULY	1958	XXXXXXXXXXXXXXXXXXXXX.XXXXXX	
6800	AUG	1958	XXXXXXXXX...XXXXXXXXXXXXX.....X..	
6800	SEPT	1958	..XXXXXXXXXX.....	
6800	OCT	1958	.....	
6800	APR	1959	XXXXXXXXX.....XXXXX	
6800	MAY	1959	XXXXX.XXXXXXXXXXXXXX	
6800	JUNE	1959	XXXXXXXXXXXXX...XXX..XXXXXXXXXXXXX	
6800	JULY	1959	X.XXXXXXXXXXXXXXXXXXXXXX.XXX	
6800	AUG	1959	X.XXXXXXX...XX.....X	
6800	SEPT	1959	XXXXXXXXX.....XXXXXX.....	
6800	OCT	1959	.....	
6800	APR	1960	XXXXXXXXX..X.XXXX	
6800	MAY	1960	XX..XX...XX.....XX.XXXXXXXXXX	

STA'N MO. YR. X = GOOD DAY . = BAD DAY

6800	JUNF	1960	XXXXXXXXXXXXXXXXXXXXX.XX.....X.....XX
6800	JULY	1960	XX.XXXXXXXXXX.XX..XXXXXXXXX.XXXXXXXXXX
6800	AUG	1960	XX.XXXXXXXXXXXXXXXXXXXXXX.....XXXX
6800	SEPT	1960	XXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXX
6800	OCT	1960	XXXXXXXXXXXXXXXXXXXXXXXXX..X.XXXXXX.
6800	APR	1961	X.....XX
6800	MAY	1961	XXXXX..XXX.XX..XXXXXXXXX.XXXXXXXXXX
6800	JUNE	1961	XXXXXXXXXXXXX...X.XXXXXXXXXX.XX..
6800	JULY	1961	..XXXXX.XXXXXXXXXX..XXXXXXXXX.X.XX.X
6800	AUG	1961	XXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXXXXXX
6800	SEPT	1961	XX.XXXXXXXXXXXXXXXXXXXXXXXXXX.....
6800	OCT	1961	.XXX.....XXXXX.....
6800	APR	1962	XXXXXXXXXXXXXXXXX
6800	MAY	1962	XX..XXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
6800	JUNE	1962	.X.....XXX.XXXXXXXXXXXXXXXXXX
6800	JULY	1962	XXXXXXXXXXXXXXXXX...XXXXXXXXX.XXXXXX
6800	AUG	1962	XXXXX.X.XXX.XXXXXXXXXXXXXXXXXX..X.XX
6800	SEPT	1962	XXXXXXXX.XXX..XX..XXXXXXXXXXXXXXXXX.X
6800	OCT	1962	XX.XXXXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXX
6800	APR	1963	X.XXX..XXXXXXXXXXXXX
6800	MAY	1963	XXXXX.XXX..XXXXXXXXXX.XXXXXX
6800	JUNE	1963	XXXXX.XXX..XXXXXXXXXX.....XXXXXX
6800	JULY	1963	XXXXXXXXX.X...X...XXXXXXXXX.XXX.XX
6800	AUG	1963	XXXXXXXXXXXXXXXXXXXXX..XXXXXX.X..XXXXX
6800	SEPT	1963	XXXXXXXXXXXXXXXXXX.XX..XXXXXXXXXXXXXXXXX
6800	OCT	1963	XX.....XXXXXXXXXXXXXXXXXXXXXXXXX
6800	APR	1964	X.XXXXXX...X
6800	MAY	1964	XX.....XXXXXXXXXXXXXXXXX..X...XXXXX
6800	JUNE	1964	XXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
6800	JULY	1964	XXXXX.XXXXXXXXXX.XXX.XXXX.XXX.X...
6800	AUG	1964	XXXXX.XXX..XXXXXXXXXX.XXX.XXX.X...
6800	SEPT	1964	XXX.....
6800	OCT	1964	.....
6800	APR	1965	XX.XX
6800	MAY	1965	XXXXXXXXXXXXXXXXX.X.....XX..
6800	JUNE	1965	...XXXXXXXXX..X.X...XXXXXX.....
6800	JULY	1965	XXX
6800	AUG	1965	XX.XXXXXXXXXX.XX....XXXXXXXXXX....
6800	SEPT	1965	.XXX.XXXXXXXXXX.....
6800	OCT	1965	.....
6800	APR	1966	X.X.....
6800	MAY	1966	XXXXXXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX.
6800	JUNE	1966	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXX
6800	JULY	1966	XX.XXXXXX.XXX.XXXX..XXX..XXXXX
6800	AUG	1966	XX.....X...X...XXXXXXXXXXXXX.X..
6800	SEPT	1966	...XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
6800	OCT	1966	XXX
1080	APR	1939	XXXXX..XXX.XXXXXXXXXXXXXXXXXX
1080	MAY	1939	XXXXX.X.XXXXXXXXXXXXXXXXXX.....XXXXXX
1080	JUNF	1939	XX.....X...XXXX
1080	JULY	1939	XXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX.

STA'N	MO.	YR.	X = GOOD DAY	. = BAD DAY
1080	AUG	1939	XXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXX
1080	SEPT	1939	XXXX.XX.XX.....	XXXXXXXXX..XX.XX
1080	OCT	1939	.....	
1080	APR	1940	XXX.....	
1080	MAY	1940	XXXXXXXXXXXXXXXXXXXXX	XXXXX
1080	JUNE	1940	X.XXX..XXXXXXXXXXXXX	XXXXX.XXX
1080	JULY	1940	XXX....XXXXX.X....	XXXXX....XXXXX
1080	AUG	1940	XX.XXXXXXXXXXXXXXXXXXXXXX	
1080	SEPT	1940	XXX.....XX.XXXXXXX	XXXXX
1080	OCT	1940	XXXXXXXXX.....	
1080	APR	1941	XXXXX.XXX..	XXXXXXXXXXXXX
1080	MAY	1941	X.XXXXXX.XXXXX..	XXXXXXXXXXXXX
1080	JUNE	1941	XXXXXXXXXX..	XXXXXXXXXX..XXXXX
1080	JULY	1941	XXXXXXXXXXXXX.XXXXXX	XXXXXXXXXXXXX
1080	AUG	1941	XX.XXXXXXXXXXXXXXXXXXXXXX	XX.....X
1080	SEPT	1941	X.XX.....	
1080	OCT	1941	XXXXXXXXX..	XXX
1080	APR	1942	X.XXXXXX.XX	XXXXX
1080	MAY	1942	XXXXXXXXXXXXX.XX.....	XXXXX.....X
1080	JUNE	1942	XXXXXXXXXXXXX..	XXXXXXXXXXXXX..XX
1080	JULY	1942	XXX...XXXXX.XXX..	XXXXXXXXXXXXX....
1080	AUG	1942	.XXXXXXXXXXXXX..	XXXXXXXXX.XXX...XX...
1080	SEPT	1942	...XXXXXX..X.....	XX.....XX
1080	OCT	1942	.XXXXXXXXXXXXXXXXXXXXX	XX.....
1080	APR	1943	XXX.XXXXXXXXXXXXXX	XXXXX
1080	MAY	1943	XXX.XX.X.....	XXXXXXXXXXXXX.XXX.X
1080	JUNE	1943	XXXXX..XXXXX.XXX.XXX..	X....XXX.X
1080	JULY	1943	XXXXXXXXXXXXX.XXXXXX	XXXXX.XX.
1080	AUG	1943	XX.X.X.XXX..	XXXXXXXXXX....XXXXXX
1080	SEPT	1943	.XXXXXXXXXXXXXXXXXXXXX	XXXXXX
1080	OCT	1943	XXXXXXXXXXXXXXXXXXXXX	.....
1080	APR	1944	...X.XXXXXX..XXX..	XXXXXXXXXXXXX.
1080	MAY	1944	.XXX.XXXXXXXXXXXXXX	.X...XXXXXX.X
1080	JUNE	1944	XXX...XXXXX.....	XXXXXXXXXX..XXX
1080	JULY	1944	...XX.X..XXXXXXXXXXXXX	XX.XXXXX...
1080	AUG	1944	.XXXXX..XX.X..X	XXXXXXXXXXXXX.XXX
1080	SEPT	1944	XXXXXXXXXXXXXXXXXXXXX	X.XXXXXXXXXX..
1080	OCT	1944	XXXXXXXXXXXXXXXXXXXXX	
1080	APR	1945	XX.....	
1080	MAY	1945	XXXXXXXXXX.XX.....	XXXXXXXXXXXXX
1080	JUNE	1945	XXXXXX.XXXXXXX	XXXXXXXXXXXXX...X
1080	JULY	1945	XXXXXXXXXXXXXXXXXXXXX	X...XXXXXXXXX.X.X
1080	AUG	1945	XX.XXXXXXX.XXXXXX	XX
1080	SEPT	1945	XXXXXXXXXXXXXXXXXXXXX	.....
1080	OCT	1945	XXXXXXXXXX.XX	XXXXX.....
1080	APR	1946	XXXXXXXXXXXXXXXXXXXXX	
1080	MAY	1946	XXXXX..XXXXX..	XXXXXXXXXXXXX...X
1080	JUNE	1946	XXXXXX....	XXXXXXXXXXXXX.X...X.....
1080	JULY	1946	XX...X..XXXXX	XXXXXXXXXXXXXXXXXXXXX
1080	AUG	1946	XXXXXX...XX..XX..	XXXXXX.....XX
1080	SEPT	1946	XXX.....	XXXXXXXXXXXXXXXXXXXXX.XXX

STA'N MO. YR. X = GOOD DAY . = BAD DAY

1080	OCT	1946	.....
1080	APR	1947	XX...XXXXXXX
1080	MAY	1947	XXXXXXXXX...XXXXXXXXXXXXXXXXXXXXX..
1080	JUNE	1947	..XX.XX.....XXX.XXXXXX.....
1080	JULY	1947	XXXXXXXXXXXXXXXXXXXXX.XXXX.XXXXXXXXXXXXXX.
1080	AUG	1947	XXXXX.XXX.X.XXX.XXXXXX.....XXXXXX
1080	SEPT	1947	XXX.XX.XXXXXX.XXX.....XXXXX
1080	OCT	1947	XXX..X.....
1080	APR	1948	XX.....
1080	MAY	1948	XXXXXX...XXXXXXXXXX
1080	JUNE	1948	XXXXXXXXXX.....XXX.....XXXXX
1080	JULY	1948	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXX
1080	AUG	1948	XXXXXXXXX..XX.XX.XXX.XXXXXXXXXXXXXXXXXX
1080	SEPT	1948	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXX
1080	OCT	1948	XXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1080	APR	1949	X.XXXXX.XXXXXXXXXXXXXXXXXXXXXX.
1080	MAY	1949	XXXXXXXXXXXXXXXXXXXXX..XX...XXXXXXXXXXXXX
1080	JUNE	1949	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXX..XXX..
1080	JULY	1949	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXX.XXXXXXX
1080	AUG	1949	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XX.X.XXXXXX
1080	SEPT	1949	XXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX.
1080	OCT	1949	XXXXX..X.....
1080	APR	1950	XXXXX.X....XX
1080	MAY	1950	XX.X...XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXX
1080	JUNE	1950	XXXXXXXXXXXXXXXXXXXXX.....XXXXXX
1080	JULY	1950	.XXXXXXXX.X.....XXXXXXXXXXXXXXXXX..X
1080	AUG	1950	XXXXXXXXX.....XXXXXXXXXXXXXXXXX..X.XXXXX
1080	SEPT	1950	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.X...
1080	OCT	1950	.....
1080	APR	1951	XX.XXX..X.....XXXXX.
1080	MAY	1951	XXXXXXXXX..XXXXXXXXXXXXXXXXX..XX
1080	JUNE	1951	XX.....XXXXXXXXX.X....X..X...XX
1080	JULY	1951	.XXX.....XXX...XX.XXXX...XX..X
1080	AUG	1951	XXXXXXXXX.X.....XXXXXX.....
1080	SEPT	1951	XXXXX.....XX.....
1080	OCT	1951	X.....
1080	APR	1952	XXXXXXXXXXXXX.XX
1080	MAY	1952	XXXXXXXXXXXXXXXXX..XXXXXXXXXXXXXXXXX...
1080	JUNE	1952	...XXXXXX.....XX.....X.XXX
1080	JULY	1952	XXXXXXXXXXXXXXXXXXXXX.....X..XXXXXX
1080	AUG	1952	XXXXXX..XXXXXX..XXXXXXXXXXXXXXXXX...
1080	SEPT	1952	XXXXXXXXXX.XX..XXXXX.XXXXXXXXXXXXXX
1080	OCT	1952	XXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX
1080	APR	1953	.....
1080	MAY	1953	XXX.XX.XXXXXXXXXX.....XXX
1080	JUNE	1953	XXXXX...XXX....X..X...X
1080	JULY	1953	XX...XXXXXXXXXXXXXXXXX..XX..XXX.XXX
1080	AUG	1953	XX.XXXX...XXXXXXXXXXXXXXXXX..XXXXX
1080	SEPT	1953	.XXXXXXXXXXXXXXXXXXXXX.....
1080	OCT	1953	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1080	APR	1954	.....

STA'N	MO.	YR.	X = GOOD DAY	. = BAD DAY
1080	MAY	1954	XXXXX.....XXXXXXXXXXXXX.XXXYX.	
1080	JUNE	1954	.XX.....XXXXXXXXXXXXX.....X	
1080	JULY	1954	..XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX	
1080	AUG	1954	X.....XXXXXX.....XXXX	
1080	SEPT	1954	XXXX.XXXXXXXXXX.....XXXX.	
1080	OCT	1954	X.....XXXXXXXXXXXXX	
1080	APR	1955	X...X.XXX.....	
1080	MAY	1955	...XXXX.XXXX.....X.....XXXXXX	
1080	JUNE	1955	XXXXXXXXXXXXX.XXXXXXXXXXXXXX	
1080	JULY	1955	XX..XXXXXXXXXXXXX.XXXXXXX	
1080	AUG	1955	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX	
1080	SEPT	1955	XXXXXXXXXX.XX.X.....	
1080	OCT	1955	.....	
1080	APR	1956	XXX..XXX..X.....	
1080	MAY	1956	X.....XXXXXXXXXXXXX	
1080	JUNE	1956	X.X..XXXXXXXXXX.....XXXXXXXXXX..	
1080	JULY	1956	...XXXXXXXXXXXXXXXXXXXXX..XXXXX	
1080	AUG	1956	X.XXXXXXX.XXXXXX..XXXXX.....X...	
1080	SEPT	1956	XXXXXXXXXXXXX.XXXXXXX..XXXXXXXXX	
1080	OCT	1956	XXXXXXXXXXXXX.XXXXXXXXXXXXXX.....	
1080	APR	1957	XXXXXXXX	
1080	MAY	1957	XXXXXX..XXXXX..XXXXXXXXXXXXX	
1080	JUNE	1957	XXXXX.X.....X..XXXXXXXXXXXXX.X..X	
1080	JULY	1957	XXXXXX.XXXXXXXXXXX..XXXXXXXXXXXXX	
1080	AUG	1957	..XXX.XXX.....XXXXX..XXXXX	
1080	SEPT	1957	XXX.....XXXXX.XXXX.XXXXXXXXXXXXXX	
1080	OCT	1957	XX.....	
1080	APR	1958	XXXXX.....XX	
1080	MAY	1958	XXXXXXXXXXXXXXXXXXXXX.XXXXXX..	
1080	JUNE	1958	XXXXXXXXXX.....XXX.XXXXXXXXXXX.....	
1080	JULY	1958	.X.....XXX.XXXXXXXXXXX.XXXXXXXXXXX	
1080	AUG	1958	XXXXXXXXXXXXXXXXXXXXX.XXXXXX.XXXX	
1080	SEPT	1958	XXXXXXXXXXXXX.....XXX	
1080	OCT	1958	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX	
1080	APR	1959	XXXXX..X.XXX.....XX	
1080	MAY	1959	XXXXXXXXXXXXX.....XXXX	
1080	JUNE	1959	XXXXXXXXXX..XXXXX.XXXXXX.....XX	
1080	JULY	1959	XXXXXXXXXXXXXXXXXXXXX.XXXXXX..XX	
1080	AUG	1959	XXXXXXXXXXXXX..XXXXX.....XX.XXX	
1080	SEPT	1959	XXXXXXXXX.XXXXXXX..XX.XXXXXXXXXX..	
1080	OCT	1959	XX.X.....XXXXXXXXXXXXX.XX	
1080	APR	1960	...XXXXXXXXXXXXX.XXXXXX.....X	
1080	MAY	1960	XXXXXX.X.....XXX.XXXXXXX	
1080	JUNE	1960	XXXXXXXXXXXXXXXXXX..XXX....X..X..X	
1080	JULY	1960	..XXXXXXXXXXXXXXXXXXXXX.XX.XXXXXXX	
1080	AUG	1960	XXXXXX.XXXXXXX.XXXXXX.XX.XXXXXXX	
1080	SEPT	1960	XXXXXXXXXXXXXXXXXXXXX.XX.XXXXXXX	
1080	OCT	1960	XXXXXXXXX.....	
1080	APR	1961	XX.....	
1080	MAY	1961	X.....X..XXXXXXXXXXXXX.XX	
1080	JUNE	1961	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX	

1470	1480	1490	1500	1510	1520	1530	1540	1550	1560	1570	1580	1590	1600	1610	1620	1630	1640	1650	1660	1670	1680	1690	1700	1710	1720	1730	1740	1750	1760	1770	1780	1790	1800	1810	1820	1830	1840	1850	1860	1870	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	2020	2030	2040	2050	2060	2070	2080	2090	2100	2110	2120	2130	2140	2150	2160	2170	2180	2190	2200	2210	2220	2230	2240	2250	2260	2270	2280	2290	2300	2310	2320	2330	2340	2350	2360	2370	2380	2390	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500	2510	2520	2530	2540	2550	2560	2570	2580	2590	2600	2610	2620	2630	2640	2650	2660	2670	2680	2690	2700	2710	2720	2730	2740	2750	2760	2770	2780	2790	2800	2810	2820	2830	2840	2850	2860	2870	2880	2890	2900	2910	2920	2930	2940	2950	2960	2970	2980	2990	3000	3010	3020	3030	3040	3050	3060	3070	3080	3090	3100	3110	3120	3130	3140	3150	3160	3170	3180	3190	3200	3210	3220	3230	3240	3250	3260	3270	3280	3290	3300	3310	3320	3330	3340	3350	3360	3370	3380	3390	3400	3410	3420	3430	3440	3450	3460	3470	3480	3490	3500	3510	3520	3530	3540	3550	3560	3570	3580	3590	3600	3610	3620	3630	3640	3650	3660	3670	3680	3690	3700	3710	3720	3730	3740	3750	3760	3770	3780	3790	3800	3810	3820	3830	3840	3850	3860	3870	3880	3890	3900	3910	3920	3930	3940	3950	3960	3970	3980	3990	4000	4010	4020	4030	4040	4050	4060	4070	4080	4090	4100	4110	4120	4130	4140	4150	4160	4170	4180	4190	4200	4210	4220	4230	4240	4250	4260	4270	4280	4290	4300	4310	4320	4330	4340	4350	4360	4370	4380	4390	4400	4410	4420	4430	4440	4450	4460	4470	4480	4490	4500	4510	4520	4530	4540	4550	4560	4570	4580	4590	4600	4610	4620	4630	4640	4650	4660	4670	4680	4690	4700	4710	4720	4730	4740	4750	4760	4770	4780	4790	4800	4810	4820	4830	4840	4850	4860	4870	4880	4890	4900	4910	4920	4930	4940	4950	4960	4970	4980	4990	5000	5010	5020	5030	5040	5050	5060	5070	5080	5090	5100	5110	5120	5130	5140	5150	5160	5170	5180	5190	5200	5210	5220	5230	5240	5250	5260	5270	5280	5290	5300	5310	5320	5330	5340	5350	5360	5370	5380	5390	5400	5410	5420	5430	5440	5450	5460	5470	5480	5490	5500	5510	5520	5530	5540	5550	5560	5570	5580	5590	5600	5610	5620	5630	5640	5650	5660	5670	5680	5690	5700	5710	5720	5730	5740	5750	5760	5770	5780	5790	5800	5810	5820	5830	5840	5850	5860	5870	5880	5890	5900	5910	5920	5930	5940	5950	5960	5970	5980	5990	6000	6010	6020	6030	6040	6050	6060	6070	6080	6090	6100	6110	6120	6130	6140	6150	6160	6170	6180	6190	6200	6210	6220	6230	6240	6250	6260	6270	6280	6290	6300	6310	6320	6330	6340	6350	6360	6370	6380	6390	6400	6410	6420	6430	6440	6450	6460	6470	6480	6490	6500	6510	6520	6530	6540	6550	6560	6570	6580	6590	6600	6610	6620	6630	6640	6650	6660	6670	6680	6690	6700	6710	6720	6730	6740	6750	6760	6770	6780	6790	6800	6810	6820	6830	6840	6850	6860	6870	6880	6890	6900	6910	6920	6930	6940	6950	6960	6970	6980	6990	7000	7010	7020	7030	7040	7050	7060	7070	7080	7090	7100	7110	7120	7130	7140	7150	7160	7170	7180	7190	7200	7210	7220	7230	7240	7250	7260	7270	7280	7290	7300	7310	7320	7330	7340	7350	7360	7370	7380	7390	7400	7410	7420	7430	7440	7450	7460	7470	7480	7490	7500	7510	7520	7530	7540	7550	7560	7570	7580	7590	7600	7610	7620	7630	7640	7650	7660	7670	7680	7690	7700	7710	7720	7730	7740	7750	7760	7770	7780	7790	7800	7810	7820	7830	7840	7850	7860	7870	7880	7890	7900	7910	7920	7930	7940	7950	7960	7970	7980	7990	8000	8010	8020	8030	8040	8050	8060	8070	8080	8090	8100	8110	8120	8130	8140	8150	8160	8170	8180	8190	8200	8210	8220	8230	8240	8250	8260	8270	8280	8290	8300	8310	8320	8330	8340	8350	8360	8370	8380	8390	8400	8410	8420	8430	8440	8450	8460	8470	8480	8490	8500	8510	8520	8530	8540	8550	8560	8570	8580	8590	8600	8610	8620	8630	8640	8650	8660	8670	8680	8690	8700	8710	8720	8730	8740	8750	8760	8770	8780	8790	8800	8810	8820	8830	8840	8850	8860	8870	8880	8890	8900	8910	8920	8930	8940	8950	8960	8970	8980	8990	9000	9010	9020	9030	9040	9050	9060	9070	9080	9090	9100	9110	9120	9130	9140	9150	9160	9170	9180	9190	9200	9210	9220	9230	9240	9250	9260	9270	9280	9290	9300	9310	9320	9330	9340	9350	9360	9370	9380	9390	9400	9410	9420	9430	9440	9450	9460	9470	9480	9490	9500	9510	9520	9530	9540	9550	9560	9570	9580	9590	9600	9610	9620	9630	9640	9650	9660	9670	9680	9690	9700	9710	9720	9730	9740	9750	9760	9770	9780	9790	9800	9810	9820	9830	9840	9850	9860	9870	9880	9890	9900	9910	9920	9930	9940	9950	9960	9970	9980	9990	10000
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STATION	MO.	YR.	X = GOOD DAY	. = BAD DAY
1080	JULY	1961	XXXXXXXXXXXXXXXXXX	..XX.....X....X
1080	AUG	1961	XXXXXXXXXXXXXXXXXX	..XXXXXXXXXXXXXXXX
1080	SEPT	1961	XXXXXXXXXX	..XXXXXXXXXX..XXXX.XX.X
1080	OCT	1961	XXXXXX	.....
1080	APR	1962	X	XXXXXXXXXXXXXXXXXX
1080	MAY	1962	XXXXX..XXXXX..XXXXX	..XXXXXXX
1080	JUNE	1962	XX.XXXXXX..XXXXX.XX	XXXXXXXXXXXX
1080	JULY	1962	X.XXX.X.X.XXXXXXXX	XXXXXXXXXXXX.XXX
1080	AUG	1962	XXXXX..XXXXXXXXXXXX	XXXXXX..XX
1080	SEPT	1962	..XXX.....	XXXXXXXXXXXXXXXXXX
1080	OCT	1962	XXXXXXXXXXXX	XXXXXXX..XXXXXXX
1080	APR	1963	XXXX..XX	XXXXX.XXX
1080	MAY	1963	XXXXXXXXXXXX	XXXXXXXXXXXX
1080	JUNE	1963	XX.XXX.....	XXXXXXXXXX..X.XX..
1080	JULY	1963	..XXXXX.....	XXXXX..XXXXXX..X.XXX
1080	AUG	1963	..XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
1080	SEPT	1963	XXXXXXXXXXXX	XXXXXXXXXX
1080	OCT	1963	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
1080	APR	1964	.....	XXX
1080	MAY	1964	X.....	XXXXXXXXXXXX.XXXXXX
1080	JUNE	1964	XXXXXXXXXXXX	XXXXXXX
1080	JULY	1964	XX.....	XXXXXXXXXXXXXXXXXX
1080	AUG	1964	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
1080	SEPT	1964	...XXXXX.XXXXXXX	..X..XXX.....
1080	OCT	1964	XX..XXXXXXX	.....
1080	APR	1965	.....	XXXXXXX
1080	MAY	1965	..XXXXXXXXXXXXXXXX	XX..XXXXX..
1080	JUNE	1965	..XXXXXXXXXX	XXXX.....
1080	JULY	1965	XXXXXX.....	XXXXXXX..XXXXX..X
1080	AUG	1965	XXX..XXXXXXX	XXXXXXX.X..X
1080	SEPT	1965	XXXXX	.....
1080	OCT	1965	X	XXXXXXXXXXXXXXXXXX
1080	APR	1966	X.X.XX	XXX.....
1080	MAY	1966	XX.XX	..XX.XXXXXXXX.X..
1080	JUNE	1966	X	XXXXXXX.XXXXXX
1080	JULY	1966	XXXXXXX	XXXXXXX.XX..XXXXX
1080	AUG	1966	XX.....	XXXXXXXXXXXXXXXXXX.X
1080	SEPT	1966	XXXXXXXXXXXXXXXX	XXXXXXX.X
1080	OCT	1966	..XXXXXXXXXX	XXXXXXX.XXXX
1085	APR	1921	X.....	XXXXXXXXXXXX.XXXXXX..
1085	MAY	1921	..XXXXX	XXXXXXXXXXXXXXXXXX.XXXXXX
1085	JUNE	1921	X.XXXXXXXXXXXXX	XXXXXXXXXXXX
1085	JULY	1921	XXXXXX	XXXXX.XXXXXXX..XXXXX
1085	AUG	1921	XXX..XXXXXX	XXXXX..XXXXXXXXXXXX
1085	SEPT	1921	XXXXXXXXX	XXXXXXXXXXXX
1085	OCT	1921	XXXXXXXXXXXXXXXX	XXXXXXXXXXXX
1085	APR	1922	X	X..XXXXXX
1085	MAY	1922	XXXXXXXXXXXXXXXX	XXXXXXXXXXXX
1085	JUNE	1922	XXXXXXXXXXXXXXXX	.....
1085	JULY	1922	XXXXXX..	XXXXXXXXXXXX.XXXXXX
1085	AUG	1922	XXXXX.X	XXXXX.XXXXXX.XXXXXX

STA'N MO. YR. X = GOOD DAY . = BAD DAY

1085	SEPT	1922	XXXXXXXXXXXX.....XXXXXXXXXXXXXXXX
1085	OCT	1922	XXX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1085	APR	1923	XXXXXXXXXXXXXXXXXXXXX..
1085	MAY	1923	.XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.....
1085	JUNE	1923	XXX.....XXX.....XXXXXX
1085	JULY	1923	.X.X.X...XXX.XXXXXXXXXXXXXXXXXXX..
1085	AUG	1923	.XX...XXXXXXXXXXXXXXXXX.XXXXXXXXXXX
1085	SEPT	1923	XXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXX
1085	OCT	1923	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1085	APR	1924	XXXXXXXX
1085	MAY	1924	XXXXXXXXXXXXXXXXXXXXX.XXXXXX.XXXXXX
1085	JUNE	1924	XXXXX.X.XXXXXX...X.....XXXXX...X
1085	JULY	1924	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXX...X
1085	AUG	1924	X..XXXXXXXXXXXXXXXXX.XXXXXXXXXXX
1085	SEPT	1924	XXXXXXXXXXXXXXXXXXXXX.....XXX
1085	OCT	1924	XX..XXXXX.....XXXXXXXXXXXXXXXX
1085	APR	1925	XXXXXX..XXX.XXX.....XX
1085	MAY	1925	XXXXXXXXXXXXXXXXXXXXX.X.XXXXXXX
1085	JUNE	1925	XX.XX.XXX...XXXXX.XXXX..XXXXX.XX
1085	JULY	1925	XXXXX...XXXXXXXXXXXXX.XXX.XXXXXXXXX
1085	AUG	1925	XXXXXXXXXXXXXXXXX.....XXX..XXXXXXXXX
1085	SEPT	1925	XXXXX..XX.....X.....XXXXX.....
1085	OCT	1925	.....
1085	APR	1926	X.XXXXXXXXXXXXXXXXXXXXXX
1085	MAY	1926	.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1085	JUNE	1926	XXXXXXXXXXXXX.....X...XXXXXXXXXXXX
1085	JULY	1926	..XXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1085	AUG	1926	.XXX.XX..XX...X.XX..XXXXX.XXX.
1085	SEPT	1926	X.....
1085	OCT	1926	.....
1085	APR	1927	XXXXX..XXXXXXXXXXXX.
1085	MAY	1927	.XX.....XXXXXXXXX.....X.XXXXX...
1085	JUNE	1927	..XXXXX.....XXXXXXXXXX.X..X..
1085	JULY	1927	.X.XXXXXXXXXX.....XXXXX..XXX
1085	AUG	1927	.XX.X.XXXXXXXXXXXXXX.X...XXXXXX.XX
1085	SEPT	1927	XXXXXX.....XXXXXXXXXX...
1085	OCT	1927	XXXXXXXXXXXXXXXXXXXXX
1085	APR	1928	XXXXXXXX
1085	MAY	1928	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1085	JUNE	1928	XX.....XXXXX.....XXXXX.
1085	JULY	1928	.XXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..
1085	AUG	1928	.XXXXXXXXXXXXX.XXXXXX...X.....XX
1085	SEPT	1928	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1085	OCT	1928	XXXXXXXXXXXXX...XXXXX.XXXXXXXXXXX..XXX
1085	APR	1929	XX.....X.....
1085	MAY	1929	XXXXX.....XXXXXXXXXXXXXXXXXXXX
1085	JUNE	1929	XXXXXXXXXXXXX.XXXXXXXXXXXXXX
1085	JULY	1929	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1085	AUG	1929	XXXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX
1085	SEPT	1929	..X.XX...XXXXXXXXXXXXXXXXXXXXXXXXXX
1085	OCT	1929	XXXXXXXXXXXXXXXXXXXXX.....

STA'N MO. YR. X = GOOD DAY . = BAD DAY

1085	APR	1930	..XXXXXXXXXXXXX.....X.....
1085	MAY	1930	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXX.X.
1085	JUNE	1930	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.....X..XXX
1085	JULY	1930	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXX
1085	AUG	1930	X.XXXXXXXXXXXXXXXXXXXXXX.XXXXX..XXXXX
1085	SEPT	1930	XXXXXXXXXXXXXXXXXXXXX.XX..XX.....
1085	OCT	1930	..XXXXX.....
1100	APR	1931	XXXXX.....XXXXXXXXXXXXX
1100	MAY	1931	XX..XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1100	JUNE	1931	XXXXXXXXX..XXXXXXXXX.....XXXXXXXXXXXXX.
1100	JULY	1931	XXXXX...XXXXX.X.XX.XXXXXXXXXXXXXXX
1100	AUG	1931	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXX
1100	SEPT	1931	XXXXXXXXX.....XXX
1100	OCT	1931	XXXXX..XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1100	APR	1932	XX.XXXXX.....
1100	MAY	1932	..XXXXXXXXXXXXX..XXXXX.....XX
1100	JUNE	1932	XXXXXXXXXXXXXXXXXXXXX..XXXXX
1100	JULY	1932	XX.....XXXXXXXXXXXXX..XXXXX.XXXXXXX
1100	AUG	1932	XXXXXXXXXXXXX..XXXXXXXXX.XXXXXXXXXX...
1100	SEPT	1932	..XXXXX..XXXXXXXXX.....XX
1100	OCT	1932	XXXXX...X.XXXXX...XXXXXXX.....
1100	APR	1933	X.....XXX..X
1100	MAY	1933	XXXXXX.....XXX.....XXXXXXXXXXXXX
1100	JUNE	1933	XXXXX.XXXXXXXXXXXXXXXXXXXXXX.XXXXX..X
1100	JULY	1933	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
1100	AUG	1933	.XXX.XXXXXXXXXXXXXXXXXX..XXXXXXXXXX..
1100	SEPT	1933	.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1100	OCT	1933	XXXXXXXXXXXXXXXXXXXXX.XXXX.....
1100	APR	1934	XXXXXXXXX.XXXXXXXXXXXXXXXXXX..
1100	MAY	1934	..XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
1100	JUNE	1934	XX.....XXXXXXXXXXXXX..XXXXXXXXXX..X
1100	JULY	1934	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
1100	AUG	1934	XXXXXXXXXXXXXXXXXXXXX.XXXXXX.X..XXXXXX.X
1100	SEPT	1934	XXXXXX...XX.....X.....
1100	OCT	1934	XXXXXXX.....
1100	APR	1935	XXXXX..XX..XX.
1100	MAY	1935	XXXXX.....X...XXXX.XXXXX..
1100	JUNE	1935	.XXXXXXXXXXXXXXXXX.....XXXXXXXXXXXXX
1100	JULY	1935	XXXXX.XXXXXXXXXXXXXX..XXXXXXXXXXXXX.XX.
1100	AUG	1935	...XXXXXXXXXXXXX..XX.....XXXXXXXXXXXXX
1100	SEPT	1935	XXXXX.XXXXXXXXXXXXXXXXXXXXXX.XXXXXX
1100	OCT	1935	XXXXXX...XXXXXXXXXX.....
1100	APR	1936	XXXXXX.X...XX.XXX
1100	MAY	1936	XXXXXXXXXXXXX.XXXXXXX...XXXXXXXXXX..
1100	JUNE	1936	...XX.....XXX.XXXXXXXXXXXXXXXXXXXXXX
1100	JULY	1936	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1100	AUG	1936	XXXXXXXXXXXXXXXXXXXXX.X.XX...XXXXXXXXXXXXX
1100	SEPT	1936	XXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXX.....
1100	OCT	1936	XXXXXXXXXXXXX.....
1100	APR	1937	XXXXXXXXXX.....XXXXX
1100	MAY	1937	XXXXX...XXXXX.XXXXXX.X...XXXXXX

DATE	TIME	NAME	STATION
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1950	0088	...	...
1950	0089	...	...
1950	0090	...	...
1950	0091	...	...
1950	0092	...	...
1950	0093	...	...
1950	0094	...	...
1950	0095	...	...
1950	0096	...	...
1950	0097	...	...
1950	0098	...	...
1950	0099	...	...
1950	0100	...	...

STA'N MO. YR. X = GOOD DAY . = BAD DAY

1100	JUNE	1937	X.X.X..XX.....XXXXXXXXXXXXXXXXXX.
1100	JULY	1937	X.XX.XXXXXX.....XXXXXXXXXXXXXXXXXX.
1100	AUG	1937	..XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1100	SEPT	1937	XXXX.XXXXXXXXXXXXXXXXXX.....
1100	OCT	1937	XXXXXXXXXX..
1100	APR	1938	XXXXXX.XX.....XXXXX
1100	MAY	1938	X.X.....XXXXX.....XXX.XXXX.XX
1100	JUNE	1938	XXXXXX.....XXXXXXXXXXXXXXXXXX..XXX
1100	JULY	1938	X..XXXXXXXXXXXXXXXXXXXXXXXXXX
1100	AUG	1938	.XXXX.....XXXXXXXXXX.XX.XXXXXXXXXX
1100	SEPT	1938	XXXXXXXX..XXXXXXXXXXXXXXXXXXXXXXXX
1100	OCT	1938	XX.....XXXXXXXXXXXXXXXXXX
3880	APR	1938	XXXXXXXXXXXXX.XXX.....XXXX
3880	MAY	1938	..XXXXX..XXXXXXXXXX.....XXXXXXXXXXXX
3880	JUNE	1938	XXXXXXXXX.XXXXXX.XXXX.XXXXXXXXXX.
3880	JULY	1938	.XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXX
3880	AUG	1938	XXXXXXXXX.XXXXXX..XX.XXXX.XXXXXXXXXX
3880	SEPT	1938	XXXX.X..XXXXXXXXXXXXXXXXXXXXXXXXXX
3880	OCT	1938	XX.....XXXXXXXXXXXXXXXXXXXXXXXXXX
3880	APR	1939	XX.XXX..XXXXXXXXXXXXXXXXXXXX
3880	MAY	1939	XXXXXXXXXXXXXXXXXXXXX.XX.....XXXXXX
3880	JUNE	1939	XXXXX.....X..X.....XXXXX..XXXXX
3880	JULY	1939	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	AUG	1939	XXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXX
3880	SEPT	1939	XXXXX.....XXXXXXXXXXXXXXXXXXXXX.....
3880	OCT	1939	XXXXXX..XXXXXXXXXX.....
3880	APR	1940	XXX.....XX
3880	MAY	1940	XXX.....XXXXXXXXXXXXXXXXXXXXX.XXXX
3880	JUNE	1940	XXXXXXXXX.XXXXXXXXXXXXXX..XXX.XXXX
3880	JULY	1940	XXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXX..XXX
3880	AUG	1940	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	SEPT	1940	XXXXXXXXXXXXXXXXXX.XXXXXX.....XXX
3880	OCT	1940	XXXXXXXXXXXXXXXXXXXXX.....
3880	APR	1941	XXXXXX.....XXXXXXXXXXXX
3880	MAY	1941	XXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX..X..
3880	JUNE	1941	XXXXX.XXXXXXXXXXXXXXXXXXXXXX..
3880	JULY	1941	..XXXXXXXXXX..XXXXXXXXXXXXX.XXXXXXX
3880	AUG	1941	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXX
3880	SEPT	1941	X...X.XXX.....
3880	OCT	1941	XXXXXXXXXXXXX..XX
3880	APR	1942	XXXXX.XXXXXX.XX.XXXXX
3880	MAY	1942	XXX.XXXX.....XXXXX.....
3880	JUNE	1942	XXX...XXX..XXXXX..XXXXX...XX
3880	JULY	1942	XXXXXXXXXXXXXXXXXXXXX.XXXXXX.....X
3880	AUG	1942	XXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXXX..
3880	SEPT	1942	..XXXXXXXXXX.XXXX.....XXXXXXXXXXXX
3880	OCT	1942	XXXXXXXXXXXXXXXXXXXXX.XX.XXXX
3880	APR	1943	XXXXXXXXXXXXXXXXXXXXX..XXX
3880	MAY	1943	XXXXXXXXXX.....XXXXXXXXXXXXXXXXXX
3880	JUNE	1943	XXXXXXXXXXXXXXXXXXXXX.XXX.
3880	JULY	1943	XXXXXXXXX.XXXXXX..XXXXXXXXXX.XXXXXX

STA'N	MO.	YR.	X = GOOD DAY	. = BAD DAY
3880	AUG	1943	XX.X.XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXX
3880	SEPT	1943	XXX.XXXXXXXXXXXXXX	XXXXXXXXXXXX
3880	OCT	1943	XXXX.XXXXXX	
3880	APR	1944	...X...XXXXXXXXXXXXXXXXXX	
3880	MAY	1944	XXXXXXXXXXXXXXXXXXXXX	X.XXXXXXXXXX
3880	JUNE	1944	XXX.XXXXXXX	...XXXX.XXXXX.XXXX
3880	JULY	1944	XXX...XXXXXXXXXXXXXXXXXXXX	
3880	AUG	1944	XXXXXXXXXXXXX	.X.XXXXXXXX..XX.XXX
3880	SEPT	1944	XXXXXXXXXXXXXXXXXXXXXXXXXXXX	
3880	OCT	1944	...XXXXXXXXXXXXXXXXXXXXXXXXXXXX	
3880	APR	1945	...XX	
3880	MAY	1945	XXXXXX..XXXX.XX	...X.XXXXXXX
3880	JUNE	1945	X.X...XXX..XXXXXXXXXXXX	...X
3880	JULY	1945	XXXXXXXXXXXXX.XXXXXX	XXXXXXXXXXXXXXXX
3880	AUG	1945	XXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
3880	SEPT	1945	XXXXXXXXX..XXXXXX	
3880	OCT	1945	XXXXXXXXXXXXXXXXXXXXXXXXXXXX	XX...XXX.
3880	APR	1946	...XXXXXXXXXXXXXXXXXXXX	
3880	MAY	1946	XXXXXXXXXXXXX..XXXXXXXXXXXX	
3880	JUNE	1946	X.XXX...XXXXXXXXXXXX	...XXXXXX
3880	JULY	1946	XXXXXXXXX..XXXXXXXXXXXXXXXXXXXX	
3880	AUG	1946	XXXXXXXXXXXXXXXXXXXXXXXXXXXX	...XX
3880	SEPT	1946	XXXXX...XXXXXXXXXXXX	
3880	OCT	1946		
3880	APR	1947	...XX.XXXXXX	...XXXXXX
3880	MAY	1947	XXXXXXXXXXXXXXXXXX.XXXXXX	XXXXXXXXXXXX
3880	JUNE	1947	...X...XXXX.XXXXX..XXX..X	
3880	JULY	1947	XXXXXXXXXXXXXXXXXXXXXXXXXXXX	
3880	AUG	1947	XXXXX..X.XXXXXX..XXXXX	...XXXXXX
3880	SEPT	1947	XXXXXXXXXXXXXX.XX	...XXXX
3880	OCT	1947	XXX.XXX.XXXXXXXXXXX	
3880	APR	1948	...XXXXXXXXXX	..X.X
3880	MAY	1948	XXXXXX...XXXXX.X	XXXXXXXXXXXX
3880	JUNE	1948	XX.XXXXXX	..XXXX
3880	JULY	1948	XXXXXXXXXXXXXXXXXXXXXXXXXXXX	..XX
3880	AUG	1948	XXXXXXXXXXXXXXXXXXXXXXXXXXXX	
3880	SEPT	1948	XXXXXXXXXXXXXXXXXXXXXXXXXXXX	
3880	OCT	1948	XXXX.XXXXXXX	XXXXXXXXXXXX
3880	APR	1949	...XXXX.XXXXX.XXXXXXXXXXXXX	
3880	MAY	1949	XXX.XXXXXXXXXXX	...XXXX
3880	JUNE	1949	..XXXXXXXXXXXXX	...XXXXXX.XXXX
3880	JULY	1949	XXXXXXXXXXXXX..XXXXXX	XXXXXXXXXXXX
3880	AUG	1949	XXXXXXXXXXXXX.XXXXXXXXXXX	XXXXXX
3880	SEPT	1949	X.XXXXXXX..XXXXXXXXXXXXXXXX	
3880	OCT	1949	XXXXX.X.X	
3880	APR	1950	...XXXXXXXXXXXXX	X...XX
3880	MAY	1950	X...XXXXXXXXXXXXX.XXXXXX	XXXXXXXXXX
3880	JUNE	1950	XXXXXXXXXXXXXXXXXXXXXXXXXXXX	X..XXXXX
3880	JULY	1950	.XXXXXX.XXXXXXX.XXXX.XXXXXXXXXXXXX	
3880	AUG	1950	XXXXXX.XXXXXXXXXXXXX	XXXXXXXXXX
3880	SEPT	1950	XXXX.XXXXXXXXXXXXX	

STA'N MO. YR. X = GOOD DAY . = BAD DAY

3880	OCT	1950	..XXXXXXXXXXXX.XX.....
3880	APR	1951	...XXXX..XXX..XX.....XXXXX..
3880	MAY	1951	XXXXXXXXX....XXXXXXXXXXXXXXXXXX
3880	JUNE	1951	XX.....XXXXXXXXXXXX.XX.....XX
3880	JULY	1951	XXXXXXXXX..XXXXXXXXXXXXXXXXXXXXXXXXXX
3880	AUG	1951	XXXXXXXXX.X..X.XXXXXXXXXXXXXX.....
3880	SEPT	1951	XXXXX.....XXXXXX.X.....
3880	OCT	1951	XXXXXX.XX.....
3880	APR	1952	XXXXXXXXXX.XXXXXXXXXXXXXX
3880	MAY	1952	XXXXXXXXXXXXXXXXX....XXXXXXXXXXXXXXXXXX
3880	JUNE	1952	XXXXXXXXXXXXX..X.XXXXXXXXXX.XXXX..XX
3880	JULY	1952	XXXXXXXXXXXXXXXXXXXXX..X....XXXXXXXXXX
3880	AUG	1952	XXXXXX.....XXXXXXXXXXXXXXXXXXXXX...
3880	SEPT	1952	.XXXXXXXXXXXXX....XXXXXXXXXXXXXXX
3880	OCT	1952	XXXXXXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX
3880	APR	1953	X.....
3880	MAY	1953	XXXXX..XXXXXXXXXXXXXXXXXXXXX
3880	JUNE	1953	X.....X.XXXXXX...X..XXXXXX
3880	JULY	1953	XXXXXXXXXXXXXXXXXXXXX.XXXX..XXXXX
3880	AUG	1953	XXXXXXXXXXXXXXXXXXXXX.XXXXXXX
3880	SEPT	1953	..XXXXXXXXXXXXX.XXXXXXXXXXXXXX
3880	OCT	1953	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
3880	APR	1954	XXXXX....X.....
3880	MAY	1954	XXXXXX.XXXXXXXXXXXXXXXXXXXXXX
3880	JUNE	1954	.XXXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX..XX
3880	JULY	1954	XXXXXXXXXXXXXXXXXXXXX.XXXXXX..XX
3880	AUG	1954	XXX...XXXXXXXXX..XXX.XXXX.X...XXX
3880	SEPT	1954	XXX...XXXXXXXXX.....XXXX....
3880	OCT	1954	XXXXXXXXXXXXXXXXXXXXX
3880	APR	1955	XXXXXXXXX.XXX.....
3880	MAY	1955	XX.XXXX.....XXX.....XX
3880	JUNE	1955	XXXXXXXXXXXXXXXXXXXXX.XXX...
3880	JULY	1955	XX..X..XXXXXXXXXXXXXXXXXXXXX
3880	AUG	1955	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
3880	SEPT	1955	XXXXXXXXXX.XXXXXXXXXXX.....
3880	OCT	1955	..XX.....XXXXXXXXXXXXXXXXXXXXX..
3880	APR	1956	XXXXXXXXX..X.....
3880	MAY	1956	XXX....XXXXXXXXXXXXXXXXXXXXX
3880	JUNE	1956	XXX.XXXXXXXXXX....XXXXXXXXXXXXX.
3880	JULY	1956	XXXXX..XX.X.XXXXXXXXXXXXXX
3880	AUG	1956	..XXXXXX..XXXXXXXXXXXXXXXXXXXXX.X..X
3880	SEPT	1956	XXXXXXXXXXXXXXXXXXXXX.XXXX..XX
3880	OCT	1956	XXXXXXXXXXXXXXXXXXXXX.XXXX.....
3880	APR	1957	XXXXX....XXX
3880	MAY	1957	XXXXXXXXXXXXXXXXX.XXXXXX.XXXXXXXXXXX
3880	JUNE	1957	X.XX.XX....X.XXXXXX..XXXXXXX.X
3880	JULY	1957	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
3880	AUG	1957	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
3880	SEPT	1957	XX.XXXXXXXXXX.XXXXXX.....XXXXXXX
3880	OCT	1957	XX.....
3880	APR	1958	XXXXXXXXX.....X.XXX

STA'N MO. YR. X = GOOD DAY . = BAD DAY

3880	MAY	1958	XXXXXXXXXXXXX...XXXXXXXXXXXXXXXXXX..
3880	JUNE	1958	...XXXXXX.XXX.XX..X.XXXXXX..XX
3880	JULY	1958	XXXXXXXXXXXXX...XXXXXXXXX..XXX...XX
3880	AUG	1958	XXXXXXXXXXXXX.XXXXXXXXXX..XXXXX.XXX
3880	SEPT	1958	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX...XXXXXX
3880	OCT	1958	XXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	APR	1959	XXX.....XXXXXX
3880	MAY	1959	XX...XXXXX.XX.XX....X.XX
3880	JUNE	1959	XXXXXXXXXXXXXXXXXXXXX.XXX.XXXX....XX
3880	JULY	1959	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXX.XXX
3880	AUG	1959	XXXXXXXXXXXXX.XX.XXX...XXXXXXXXXXXXX.
3880	SEPT	1959	XXXXXXXXX.XXXXXXXXXX..XXXXXXXXXXXXXXXXX
3880	OCT	1959	XXXXX.....XXXXX..XX
3880	APR	1960	XXXXXXXXXXXXXXXXXXXXX.....
3880	MAY	1960	XXXXXXXXXXXXX..XXXXX....XXXXX
3880	JUNE	1960	XXXXXXXXXXXXXXXXX...XXX..XXXXXXXXXX
3880	JULY	1960	XX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	AUG	1960	.X..XX.XXXXXXXXXXXXXXXXXX.XXXXXXXXXX
3880	SEPT	1960	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	OCT	1960	XXXXXXXXXXXXX...XXXXXXXXXXXXX..XX
3880	APR	1961	XXX.XXX..XXX...XXXXXX..XX
3880	MAY	1961	XXXXX.....XX..XXXXXXXXXXXXXXXXXXXXX
3880	JUNE	1961	XXXXXXXXXXXXX.XXX.X.XXXXXXXXXXXXXXX
3880	JULY	1961	XXXXXX.XXXXXXXX.XXXXXX..XXX....
3880	AUG	1961	XXXXXXXXX..XXXXXXXXXXXXXXXXXXXXXXXXXX
3880	SEPT	1961	...XXXXXX.....XX.X.....
3880	OCT	1961	...XX.....X.....
3880	APR	1962	...XXX.X...XXXXXXXXXXXXXXXXXXXXX
3880	MAY	1962	XXXXXX.XXXXXX..XXXXX..XXXXXXXXXX.X
3880	JUNE	1962	XXXXXXXXXXXXX...XXX..XXXXXXXXXX
3880	JULY	1962	XXXXX.XXXX.XXXXXX.XXXXXXXXXX..XX.
3880	AUG	1962	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXX
3880	SEPT	1962	X..XXX.....XXXXXXXXXXXXXXXXXXXXX
3880	OCT	1962	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	APR	1963	XX..XXXXXXXXX..XX..XXXXXXXXXX
3880	MAY	1963	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	JUNE	1963	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX...XXXXX..
3880	JULY	1963	.X.XXXXXX..XX.XXXXXXXXXXXXXXXXXXX
3880	AUG	1963	.XXXXXXXXXX.XXXXXXXXXXXXXX.....XXX
3880	SEPT	1963	XXXXXXXXXXXXX.XXX.....XXXXXXXXXXXXX
3880	OCT	1963	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	APR	1964	X.XXX.....X.
3880	MAY	1964	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	JUNE	1964	XXXXXXXXX.XXX.X.X.....XXXXXXXXXX
3880	JULY	1964	X.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	AUG	1964	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	SEPT	1964	...XXX.....XXXXX.XXXXXX.....
3880	OCT	1964	XXXXXXXXXXXXXXXXXXXXX..XXXXX
3880	APR	1965	XXXXXXXXXX
3880	MAY	1965	XXXXXXXXXXXXXXXXXXXXX.....XXXXX
3880	JUNE	1965	XXXXXX.XXXXXX.....XXXXX..XX

STA#N MO. YR. X = GOOD DAY . = BAD DAY

3880	JULY	1965	XXXXXX.....XXXXXXXXXX.XXXXXXXXXXX
3880	AUG	1965	XXXX.XXXXXXXXXXXXXXXXXX.XX...X.X
3880	SEPT	1965	XX...XXXXX.X.....
3880	OCT	1965	.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	APR	1966	XXXXXXX.....XXXXX.....
3880	MAY	1966	.XXXXXXXXX.....XXXXXX.XXXXXXXXXX.
3880	JUNE	1966	X.....XXXXXXXXXX...XXXX
3880	JULY	1966	XXXXXXXXXXXXXXXXXXXXXXXXX.XXXXX
3880	AUG	1966	XXX.XXXXXXXXXXXXXXXXXX...XXXXXXX.X
3880	SEPT	1966	XXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXX.X
3880	OCT	1966	XXXXXX.....
3890	APR	1922	XXX..X.....XXX.XX...
3890	MAY	1922	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XX
3890	JUNE	1922	XXXX..X.XXXXXX.XXXXXXXXXXX.XX.X
3890	JULY	1922	XXX.XXX...XXXX..XXXXXXXXXX.XXXXXX
3890	AUG	1922	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3890	SEPT	1922	XXXXXX.XXXX..XXXXXXXXXXXXXXXXXX
3890	OCT	1922	XXX.....XXXXXXXXXXXXXXXXXXXXXXXXXX
3890	APR	1923	XXXXXXXXXXXXXXXXXX.
3890	MAY	1923	XXXXX.XXXXX.X.....XXXXXXXXXXXXX.
3890	JUNE	1923	XXXXX..XXXXX..X....XXXXXX
3890	JULY	1923	X..XX..X.X.XXXX..XXXXXXXXXXXXXXXXX.
3890	AUG	1923	XXXXXXXXX.X.XXXX.XXXXXXXXXXX.XXXXXX
3890	SEPT	1923	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3890	OCT	1923	XXXXXXXXX..XXXXXXXXXXXXXXXXX..XXXXXXX
3890	APR	1924	XXXXXXXXXXXXXXXXXX.XX
3890	MAY	1924	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.....X
3890	JUNE	1924	XXX.X.....XXX.X.....XXXXXX
3890	JULY	1924	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXX
3890	AUG	1924	X....X...XXXXX..XXX...XXXXXXXXXX
3890	SEPT	1924	XXXXX..XXXXXXXXXXXXX.....XXX
3890	OCT	1924	XX.....XXXXXXXXXXXXXXXXXX
3890	APR	1925	XXXXXXXXXX.X.X.....XXXX
3890	MAY	1925	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXX
3890	JUNE	1925	X.XXXXXX.....XXXXX..XXXXXXX
3890	JULY	1925	XXXXXX.XXXXXXXXXXXXXXXXXX..XXXXXXX
3890	AUG	1925	XXXXXXXXXXXXXXXXX...XXXXXX.XXXXXXX
3890	SEPT	1925	XXXXX.....XX.....
3890	OCT	1925	.....
3890	APR	1926	XXXXXXXXXXXXXXXXXXXXX
3890	MAY	1926	XXXXXXXXXX.XXXXXXXXXXXXXXXXXXXXX
3890	JUNE	1926	XXXXXXXXXXXXXXXXXX.XXXX...XXXXXXXXXX
3890	JULY	1926	XX.XXX..XXXXXXXXXXXXXXXXXXXXXXXXXX
3890	AUG	1926	XXXXXXXXXX..XXXXX..X..XXXXXXXXXX..
3890	SEPT	1926	...X.....
3890	OCT	1926	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3890	APR	1927	XXXXXXX
3890	MAY	1927	XXX..X.....XXXXXX.....XX.....
3890	JUNE	1927	..XXXXXX.....XXXXXXXXXXXXXXXXX.X
3890	JULY	1927	XXX..XXXXXXXXXX..XXXXXXXXXXXXXXXXX.X
3890	AUG	1927	XXXXXXXXXXXXXXXXXX.XXX..XXXXXXX.XX

FILE	NO	NAME
1001	1001	1001
1002	1002	1002
1003	1003	1003
1004	1004	1004
1005	1005	1005
1006	1006	1006
1007	1007	1007
1008	1008	1008
1009	1009	1009
1010	1010	1010
1011	1011	1011
1012	1012	1012
1013	1013	1013
1014	1014	1014
1015	1015	1015
1016	1016	1016
1017	1017	1017
1018	1018	1018
1019	1019	1019
1020	1020	1020
1021	1021	1021
1022	1022	1022
1023	1023	1023
1024	1024	1024
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1026	1026	1026
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1038	1038	1038
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1072	1072	1072
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1074	1074	1074
1075	1075	1075
1076	1076	1076
1077	1077	1077
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1079	1079	1079
1080	1080	1080
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1091	1091	1091
1092	1092	1092
1093	1093	1093
1094	1094	1094
1095	1095	1095
1096	1096	1096
1097	1097	1097
1098	1098	1098
1099	1099	1099
1100	1100	1100

STA'N MO. YR. X = GOOD DAY . = BAD DAY

3890	SEPT	1927	XXXXXX.....XXXXX...
3890	OCT	1927	XXXXXXXXXXXXXXXXXX
3890	APR	1928	XXXXXXX
3890	MAY	1928	XXXXXXXXXXXXXXXXXXXXXXXXXXXX
3890	JUNE	1928	XX.XX.....XXX.....XXXX.
3890	JULY	1928	..XXX..XXXXX..X.....XXXXXX.XXXX
3890	AUG	1928	XXXXXXXXXXXXXXXXXXXXXXXXX.X.....XX
3890	SEPT	1928	XXXXXXXXXXXXXXXXXXXXXXXXXXXX
3890	OCT	1928	XXXXXXXXXX.....
3890	APR	1929	XXXX.....X..
3890	MAY	1929	X...X.....XXXXXXXXXXXX
3890	JUNE	1929	XXXXX..XXXXX..XXXXXXXXXXXX
3890	JULY	1929	XXXXXX..XXXXXXXXXXXXXXXXXXXX
3890	AUG	1929	XX.XXXXXXXXXXXXXXXXXXXXXXXXXX
3890	SEPT	1929	X....XXX....XX.XXXXXXXXXXXXX
3890	OCT	1929	XXXXXXXXXX.....XXXX.....
3890	APR	1930	...XXXXXXXXXX.....XXXXX..X....
3890	MAY	1930	..X...XX....XXXXXXXXXXXXXXXXXX.XX
3890	JUNE	1930	XXXXXXXXXXXXXXXXXXXXXXXXX...XXXX.XXX
3890	JULY	1930	.XXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXXXX
3890	AUG	1930	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXX.X
3890	SEPT	1930	XXXXXXXXXX..XXXXXX.XXXX.....XX
3890	OCT	1930	XXXXXXXXX.....
3890	APR	1931	XXXXXXXXXXXXX.X.X..XXXXXXX
3890	MAY	1931	XXX..X...XXXXXXXXXX..X.XXXXXXXXXX
3890	JUNE	1931	XX.XXXXX..XXXXXXXXXXXXXXXXXXXX
3890	JULY	1931	XX.X.XXXXXXXXXXXXXXXXXXXXXXXXXX
3890	AUG	1931	XXXXXXXXXXXXXXXXXXXXXXXXXXXX
3890	SEPT	1931	XXXXXXXXX.....XX.....XXX
3890	OCT	1931	XXXXX.....XXXXXXXXXXXXXXXXXXXX
3890	APR	1932	XXXXXXXXXXXXXXXXXXXX.....
3890	MAY	1932	...XXXXXXXXXXXXXXXXXXXX.....
3890	JUNF	1932	...XXXXX.XXXXXXX.XXXXXXXXXXXXX
3890	JULY	1932	XXX.XXXXXXXXXXXXXXXXXXXXXXXXXX
3890	AUG	1932	XXXXXXXXXX.....XXX..XX....XXXX..X
3890	SEPT	1932	.XXXXXXXXXXXXXXXXXXXX.....XXXX
3890	OCT	1932	X.XXX.....
3890	APR	1933	X.....XXXX.....
3890	MAY	1933	..XXXXX..XXXXXX..XX.XXXX..XXX
3890	JUNE	1933	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..X
3890	JULY	1933	XXXXXXXXXX.XXXXXXXXXX.XXXXXXXXXX.X
3890	AUG	1933	XXXXXXXXXXXXXXXXXXXXX.XXX...XXX...
3890	SEPT	1933	..XXXXXXXXXXXXXXXXXXXX.XXXXX.....
3890	OCT	1933	.XXXXXXXXXXXXXXXXXXXX.....
3890	APR	1934	XXXXXXXXXX.XXXXXXXXXXXXXXXXXX
3890	MAY	1934	XXXXXXXXXXXX.XXXXXXXXXXXXX.XXXXXX
3890	JUNE	1934	.X.....XXXXX.XXXXXXXXXXXXX..XXX
3890	JULY	1934	XXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXX
3890	AUG	1934	XXXXXXXXXXXXXXXXXXXXX.XXXXXXX.X
3890	SEPT	1934	XXXXXX.....XXX.....
3890	OCT	1934	XXXXXX.....

STATION MO. YR. X = GOOD DAY . = BAD DAY

3890	APR	1935	XXXXX.X.....
3890	MAY	1935	...XX.....XXXXXXXXX.XXXXXXX
3890	JUNE	1935	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3890	JULY	1935	XXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
3890	AUG	1935	XXXXXXXXXXXXXXXXXX.....XXXXXXXXXXXX
3890	SEPT	1935	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3890	OCT	1935	XXXXXXXXX.XXXXXXXXXXX.....
3890	APR	1936	XXXXXXXXX.X...X...XX
3890	MAY	1936	XXXXX.XXXXXXXXXXXXXX.....XXXXXXX
3890	JUNE	1936	XXXXX.....XXXXXXXXXXXXXXXXXXXXX.XXXXX
3890	JULY	1936	XXXXXXXXXX.XXX.XXXXXXXXXXXXXXXXXX
3890	AUG	1936	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.X..XXXXX
3890	SEPT	1936	XXXXX...XXXXXXXXXXXXXXXXXXXXXXXXXX
3890	OCT	1936	XXXXXXXXXXXXXXXXXXXXXXXXX.....XXXXXXX.
3890	APR	1937	XXXXXXXXXXXXX...XXXXXXX
3890	MAY	1937	XXXXXXXXXXXXXXXXXX..XXXXX...XX..XX
3890	JUNE	1937	XXXXXXXXXX.X...XXXXXXXXXXXXXXXXXX
3890	JULY	1937	XXXXXXXXXXXXX.X...XXXXXXXXXXXXXXXXX.
3890	AUG	1937	.XXXXX.XXXXXXXXXXXXXX.XXXXXXXXXXXXXX
3890	SEPT	1937	XXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXX....
3890	OCT	1937	XXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	APR	1922	XXX.XX.....XX.....XXXX
4480	MAY	1922	XXXXX.X.XXXXXX..XXXXXXXXXXXXXXXXXX
4480	JUNE	1922	XXXXX.....XXXXXXXXXXXXX.XXXXXXX.XX
4480	JULY	1922	XXXXXXXXXX.XXXXXXXXXXXXXXXXXX.XXXXX
4480	AUG	1922	XXXXXXXXXXXXXXXXXXXXX.XXX.XXXXXXXXXX
4480	SEPT	1922	XXXXXXXXX.X.....XXXXXXXXXXXXXXXXXX
4480	OCT	1922	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	APR	1923	XXXXXXXXXXXXXXXXXXXXXXXXXX
4480	MAY	1923	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.
4480	JUNE	1923	...X.XXXXXXXXXX.X...X...XXXXXXX
4480	JULY	1923	XXXXXXXXXX.X.XXXXX..XXX.XXXXXXXXXX
4480	AUG	1923	XXXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX
4480	SEPT	1923	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	OCT	1923	XXXXXXXXX.XXXXXXXXXXXXXX.....
4480	APR	1924	XXXXX..XXXXXXXXXXXXXXXXXXXXX
4480	MAY	1924	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	JUNE	1924	XXXXXXXXXXXXXXXXXXXXX.XXXXXX.XXXXX.XX
4480	JULY	1924	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	AUG	1924	XX..XXX..XXXXX..XXXXXXXXXXXXXXXXXX
4480	SEPT	1924	XXXXXXXXXXXXXXXXXXXXXXXXX.....X
4480	OCT	1924	XX..XXXXXXXXX.....XXXXX...
4480	APR	1925	XXXXXXXXXXXXX.XXX.....XX
4480	MAY	1925	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.
4480	JUNE	1925	XXXXXXXXX.....XXXXX..XXXXXXX
4480	JULY	1925	XXXXXX.XXXXXXXXXXXXXXXXXX...XXX
4480	AUG	1925	XXXXXXXXXXXXXXXXXXXXX.XXXXXX..XXXXXX
4480	SEPT	1925	XXXXX.....XXX.....XXX....
4480	OCT	1925	.....
4480	APR	1926	X.XXXXXXXXXXXXXXXXXXXXX
4480	MAY	1926	XXXXXXXXXX..XXXXXXXXXXXXXXXXX...XX

DATE	TIME	LOCATION
1950	10:00	1000
1950	10:05	1005
1950	10:10	1010
1950	10:15	1015
1950	10:20	1020
1950	10:25	1025
1950	10:30	1030
1950	10:35	1035
1950	10:40	1040
1950	10:45	1045
1950	10:50	1050
1950	10:55	1055
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1950	11:55	1155
1950	12:00	1200
1950	12:05	1205
1950	12:10	1210
1950	12:15	1215
1950	12:20	1220
1950	12:25	1225
1950	12:30	1230
1950	12:35	1235
1950	12:40	1240
1950	12:45	1245
1950	12:50	1250
1950	12:55	1255
1950	13:00	1300
1950	13:05	1305
1950	13:10	1310
1950	13:15	1315
1950	13:20	1320
1950	13:25	1325
1950	13:30	1330
1950	13:35	1335
1950	13:40	1340
1950	13:45	1345
1950	13:50	1350
1950	13:55	1355
1950	14:00	1400
1950	14:05	1405
1950	14:10	1410
1950	14:15	1415
1950	14:20	1420
1950	14:25	1425
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1950	14:40	1440
1950	14:45	1445
1950	14:50	1450
1950	14:55	1455
1950	15:00	1500
1950	15:05	1505
1950	15:10	1510
1950	15:15	1515
1950	15:20	1520
1950	15:25	1525
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1950	15:35	1535
1950	15:40	1540
1950	15:45	1545
1950	15:50	1550
1950	15:55	1555
1950	16:00	1600
1950	16:05	1605
1950	16:10	1610
1950	16:15	1615
1950	16:20	1620
1950	16:25	1625
1950	16:30	1630
1950	16:35	1635
1950	16:40	1640
1950	16:45	1645
1950	16:50	1650
1950	16:55	1655
1950	17:00	1700
1950	17:05	1705
1950	17:10	1710
1950	17:15	1715
1950	17:20	1720
1950	17:25	1725
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1950	17:35	1735
1950	17:40	1740
1950	17:45	1745
1950	17:50	1750
1950	17:55	1755
1950	18:00	1800
1950	18:05	1805
1950	18:10	1810
1950	18:15	1815
1950	18:20	1820
1950	18:25	1825
1950	18:30	1830
1950	18:35	1835
1950	18:40	1840
1950	18:45	1845
1950	18:50	1850
1950	18:55	1855
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1950	21:45	2145
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1950	21:55	2155
1950	22:00	2200
1950	22:05	2205
1950	22:10	2210
1950	22:15	2215
1950	22:20	2220
1950	22:25	2225
1950	22:30	2230
1950	22:35	2235
1950	22:40	2240
1950	22:45	2245
1950	22:50	2250
1950	22:55	2255
1950	23:00	2300
1950	23:05	2305
1950	23:10	2310
1950	23:15	2315
1950	23:20	2320
1950	23:25	2325
1950	23:30	2330
1950	23:35	2335
1950	23:40	2340
1950	23:45	2345
1950	23:50	2350
1950	23:55	2355
1950	24:00	2400

STATION	MO.	YR.	X = GOOD DAY	. = BAD DAY
4480	JUNE	1926	XXXXXXXXXXXXXXXXXXXXX	..XXXXXXXXXXXXX
4480	JULY	1926	..XXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXX
4480	AUG	1926	XXXXXXXXXXXXXXXXXXXXX	.X....XXXXXXXXX..
4480	SEPT	1926	XX....XXX.....	.....
4480	OCT	1926	.....	XXXXXXXXXXXXXXXXXXXXX
4480	APR	1927	.....	XXXXXXX
4480	MAY	1927	XXX.X....XXXXXXX	XX....
4480	JUNE	1927	XXXXXXXXXX.XXX.XXXXXXXXXXXXXX	..
4480	JULY	1927	XXX...XXXXXXXXX..XXX..XXXXXXXXXXXXX	
4480	AUG	1927	XXXXXXXXXX.XXXX....XX..XXXXXXXXXXXXX	
4480	SEPT	1927	X.XXXX.XX.....	XXXXXXXXXXXXX
4480	OCT	1927	XXXXXXXXXXXXX.....	XXXXXXXXXXXXXXXXXXXXX.
4480	APR	1928	.....	XXXXXXXXXXXXX
4480	MAY	1928	XXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXX
4480	JUNE	1928	XXX.XX.XXXXXXX	XX..XXXXXX.
4480	JULY	1928	...XX..XXXXXXXXXXXXX..XXXXXXXXXXXXX	
4480	AUG	1928	XXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXX
4480	SEPT	1928	XXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXX
4480	OCT	1928	XXXXXXXXXXXXX....	XXXXXXXXXXXXXXXXXXXXX
4480	APR	1929	.XXX.....	XX.X.XXXXXX..
4480	MAY	1929	XXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXX
4480	JUNE	1929	XX.XXXXXX.XXX.X.X.XXXXXXXX.XXXX	
4480	JULY	1929	XXXXX...XXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXX
4480	AUG	1929	XXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXX
4480	SEPT	1929	XXXXXXXXXXXXXXXXXXXXX	..XXXXX
4480	OCT	1929	XXXXXXXXXXXXXXXXXXXXX	..
4480	APR	1930	XXXXXXXXXXXXXXXXXX.XXXXXXXXXXX	.....
4480	MAY	1930	.XX...XX....	XXXXXXXXXXXXXXXXXXXXX
4480	JUNE	1930	XX..XXXXXXXXXX..XXXXX.XXXXXXX.XX	
4480	JULY	1930	XXXXXXXXXXXXXXXXXXXXX.XXXXXX.XXXXXX	
4480	AUG	1930	XXXXXXXXXXXXXXXXXXXXX.XXX..XXXXXXXXXXXXX	
4480	SEPT	1930	XXXXXXXXXXXXX.....	XXXXXX.....
4480	OCT	1930	.XXXXXX.....	.....
4480	APR	1931	.....	XXXXXXXXXXXXX
4480	MAY	1931	XXXXXX.XXXXXXXXXXX.XXXXXXXXXXXXXX	
4480	JUNE	1931	XX.XXXX..XXXXXXX.XXXXXXXXXXXXXX.	
4480	JULY	1931	.XXX.XXXXXXXXXXX.XXXXXXXXXXXXXX.	
4480	AUG	1931	XXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXX
4480	SEPT	1931	XXXXXXXXXX.XX...XXXXXX.....	XXXX
4480	OCT	1931	XXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXX
4480	APR	1932	.....	XXXXXXXXXXXXX.....
4480	MAY	1932	..XXXXXXXXXXXXX.XXXX.X..XXXXXXXXX.	
4480	JUNE	1932	...XXXXX.X...XXXXXXXXXXXXXXXXXXXXX	
4480	JULY	1932	XX..XXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX	
4480	AUG	1932	XXXXXXXXXXXXX.XXXXXXXXXX.....	XXXXXX
4480	SEPT	1932	XXXXXXXXXX.....	XXXX
4480	OCT	1932	XXXXX.....	.....
4480	APR	1933	.....	XXXXXXXXXXXXX..
4480	MAY	1933	.....	XXXXXX..XXXXXXXXXX
4480	JUNE	1933	XXXXXXXXXXXXXXXXXXXXX.XX.XXX.XX..	
4480	JULY	1933	XXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXX

TABLE	NO.	NAME	AGE
2442	1001	XXXXXXXXXXXXXXXXXXXX	1001
2443	1002	XXXXXXXXXXXXXXXXXXXX	1002
2444	1003	XXXXXXXXXXXXXXXXXXXX	1003
2445	1004	XXXXXXXXXXXXXXXXXXXX	1004
2446	1005	XXXXXXXXXXXXXXXXXXXX	1005
2447	1006	XXXXXXXXXXXXXXXXXXXX	1006
2448	1007	XXXXXXXXXXXXXXXXXXXX	1007
2449	1008	XXXXXXXXXXXXXXXXXXXX	1008
2450	1009	XXXXXXXXXXXXXXXXXXXX	1009
2451	1010	XXXXXXXXXXXXXXXXXXXX	1010
2452	1011	XXXXXXXXXXXXXXXXXXXX	1011
2453	1012	XXXXXXXXXXXXXXXXXXXX	1012
2454	1013	XXXXXXXXXXXXXXXXXXXX	1013
2455	1014	XXXXXXXXXXXXXXXXXXXX	1014
2456	1015	XXXXXXXXXXXXXXXXXXXX	1015
2457	1016	XXXXXXXXXXXXXXXXXXXX	1016
2458	1017	XXXXXXXXXXXXXXXXXXXX	1017
2459	1018	XXXXXXXXXXXXXXXXXXXX	1018
2460	1019	XXXXXXXXXXXXXXXXXXXX	1019
2461	1020	XXXXXXXXXXXXXXXXXXXX	1020
2462	1021	XXXXXXXXXXXXXXXXXXXX	1021
2463	1022	XXXXXXXXXXXXXXXXXXXX	1022
2464	1023	XXXXXXXXXXXXXXXXXXXX	1023
2465	1024	XXXXXXXXXXXXXXXXXXXX	1024
2466	1025	XXXXXXXXXXXXXXXXXXXX	1025
2467	1026	XXXXXXXXXXXXXXXXXXXX	1026
2468	1027	XXXXXXXXXXXXXXXXXXXX	1027
2469	1028	XXXXXXXXXXXXXXXXXXXX	1028
2470	1029	XXXXXXXXXXXXXXXXXXXX	1029
2471	1030	XXXXXXXXXXXXXXXXXXXX	1030
2472	1031	XXXXXXXXXXXXXXXXXXXX	1031
2473	1032	XXXXXXXXXXXXXXXXXXXX	1032
2474	1033	XXXXXXXXXXXXXXXXXXXX	1033
2475	1034	XXXXXXXXXXXXXXXXXXXX	1034
2476	1035	XXXXXXXXXXXXXXXXXXXX	1035
2477	1036	XXXXXXXXXXXXXXXXXXXX	1036
2478	1037	XXXXXXXXXXXXXXXXXXXX	1037
2479	1038	XXXXXXXXXXXXXXXXXXXX	1038
2480	1039	XXXXXXXXXXXXXXXXXXXX	1039
2481	1040	XXXXXXXXXXXXXXXXXXXX	1040
2482	1041	XXXXXXXXXXXXXXXXXXXX	1041
2483	1042	XXXXXXXXXXXXXXXXXXXX	1042
2484	1043	XXXXXXXXXXXXXXXXXXXX	1043
2485	1044	XXXXXXXXXXXXXXXXXXXX	1044
2486	1045	XXXXXXXXXXXXXXXXXXXX	1045
2487	1046	XXXXXXXXXXXXXXXXXXXX	1046
2488	1047	XXXXXXXXXXXXXXXXXXXX	1047
2489	1048	XXXXXXXXXXXXXXXXXXXX	1048
2490	1049	XXXXXXXXXXXXXXXXXXXX	1049
2491	1050	XXXXXXXXXXXXXXXXXXXX	1050
2492	1051	XXXXXXXXXXXXXXXXXXXX	1051
2493	1052	XXXXXXXXXXXXXXXXXXXX	1052
2494	1053	XXXXXXXXXXXXXXXXXXXX	1053
2495	1054	XXXXXXXXXXXXXXXXXXXX	1054
2496	1055	XXXXXXXXXXXXXXXXXXXX	1055
2497	1056	XXXXXXXXXXXXXXXXXXXX	1056
2498	1057	XXXXXXXXXXXXXXXXXXXX	1057
2499	1058	XXXXXXXXXXXXXXXXXXXX	1058
2500	1059	XXXXXXXXXXXXXXXXXXXX	1059

STA'N MO. YR. X = GOOD DAY . = BAD DAY

4480	AUG	1933	XXXXXXXXXXXXXXXXXXXXXXXXX...XXXXX
4480	SEPT	1933	XXXXXXXXXX.XXXXXXXXXXXXXX...XXXX
4480	OCT	1933	XXXXXXXXXXXXXXXXXXXXX.....
4480	APR	1934	XXXXXXXXX.XXXXXXXXXXXXXX.
4480	MAY	1934	XXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXX
4480	JUNE	1934	.X.....XXXXXXXXXXXXX.XX...XX
4480	JULY	1934	X.X.XXXXXXXXXXXXXXXXXXXXXXXXXX
4480	AUG	1934	XXXXXXXXXXXXX.XXXXXXXXXXXXXX.X
4480	SEPT	1934	XXXXXXX.....XXXXXX.....
4480	OCT	1934	XXXXXXXXXX.XXXXXXX..XXXXX
4480	APR	1935	XXXXXX.XX...XXXXXX.
4480	MAY	1935	XXXXX.....XXXXXXXXXX.....XX
4480	JUNE	1935	.XXXXXXXXXXXXXXXXXXXXX..XXXXXXXX
4480	JULY	1935	XXXXX.XXXXXXXXXXX.XXXXXXXXXXX
4480	AUG	1935	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	SEPT	1935	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	OCT	1935	XXXXXXX..XXXXXXXXXX.....XXXX..
4480	APR	1936	XXXXX.X...X..XX
4480	MAY	1936	XXXXXXXXXXXXXXXXXX.XXX..XXXXXXXX
4480	JUNE	1936	XXXXX.....XXXXXXXXXXXXXXXXXXXX
4480	JULY	1936	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	AUG	1936	XXXXXXXXXXXXXXXXXXXXX.XXXXX.XXXXX
4480	SEPT	1936	XXX.XXXXXXXXXXXXXXXXXXXXXXXXX
4480	OCT	1936	XXX.XXXXXXXXXXXXXXXXXX...X..XXXX.
4480	APR	1937	XXXXXXXXXX..XXXXXXXX
4480	MAY	1937	XXXXXXXXXXXXXXXX..XXXXXX.XXX..X
4480	JUNE	1937	XXXXXXXXXX..XXXXXXXXXXXXXXXXXXXX
4480	JULY	1937	XXXXXXXXXXXXX..XXXXXXXXXXXXXXXX.
4480	AUG	1937	.XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXX
4480	SEPT	1937	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXX...
4480	OCT	1937	XXXXXXXXXX
4480	APR	1938	XXXXXXXXXXXXX.X..XXXX
4480	MAY	1938	XXXXXX.XXXXXXXXXXXXXX
4480	JUNE	1938	XXXXXXXXXXXXXXXXXXXXX.XX..XX..XX
4480	JULY	1938	.XXXXXXXXXXXXXXXXXX..XXXXXXXXXXXX
4480	AUG	1938	XXXXX.X.XXXXXX.XXX.XXXXXXXXX
4480	SEPT	1938	XXXXX.....XXXXXXXXXXXXXXXXXXXX
4480	OCT	1938	XX.....XXXXXXXXXX
4480	APR	1939	XXXXXXXXXXXXX
4480	MAY	1939	XXXXXXXXXXXXXXXXXXXXXXXXX...XXXXX
4480	JUNE	1939	XXXXX..XXXXXX.....X.XX...XXXX
4480	JULY	1939	XXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXX
4480	AUG	1939	XXXXXXXXX.XXXXXXXXXXXXXXXXXXXXX
4480	SEPT	1939	XXXXX.X.XXX..XXXXXXXXXXXXXXXX..X
4480	OCT	1939	XXXXXXXXXXXXX.XXXXXXXXXX.....
4480	APR	1940	XXX.....XX
4480	MAY	1940	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.X..
4480	JUNE	1940	XX..XXXXXXXXX..XXXXXXXX
4480	JULY	1940	XXXXX.XXXXXXXXXXXXXX.X.XXX.X..XX
4480	AUG	1940	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXX
4480	SEPT	1940	XX..XXXXXXXXXXXXXXXXXXXXX.....XX

NAME	DATE	TIME	STATUS
JOHN D. SMITH	1945	10:30	OK
MARY E. JONES	1945	11:00	OK
WILLIAM R. BROWN	1945	11:30	OK
CHARLES F. WHITE	1945	12:00	OK
EDWARD G. BLACK	1945	12:30	OK
FRANK H. GREEN	1945	13:00	OK
ALICE I. HARRIS	1945	13:30	OK
JOHN K. LEE	1945	14:00	OK
MARY L. MORGAN	1945	14:30	OK
WILLIAM N. OLIVER	1945	15:00	OK
CHARLES P. QUINN	1945	15:30	OK
EDWARD R. ROSS	1945	16:00	OK
FRANK S. TAYLOR	1945	16:30	OK
ALICE T. UHLMANN	1945	17:00	OK
JOHN V. WATSON	1945	17:30	OK
MARY W. YOUNG	1945	18:00	OK
WILLIAM X. ZIMMERMAN	1945	18:30	OK
CHARLES A. ADAMS	1945	19:00	OK
EDWARD B. BAKER	1945	19:30	OK
FRANK C. CAMPBELL	1945	20:00	OK
ALICE D. DAVIS	1945	20:30	OK
JOHN E. EVANS	1945	21:00	OK
MARY F. FOSTER	1945	21:30	OK
WILLIAM G. GIBSON	1945	22:00	OK
CHARLES H. HENRY	1945	22:30	OK
EDWARD I. IRVING	1945	23:00	OK
FRANK J. JACKSON	1945	23:30	OK
ALICE K. KEENE	1945	24:00	OK
JOHN L. LAMB	1945	24:30	OK
MARY M. MITCHELL	1945	25:00	OK
WILLIAM O. O'BRIEN	1945	25:30	OK
CHARLES P. PETERSON	1945	26:00	OK
EDWARD Q. QUINN	1945	26:30	OK
FRANK R. ROSS	1945	27:00	OK
ALICE S. SMITH	1945	27:30	OK
JOHN T. TAYLOR	1945	28:00	OK
MARY U. UHLMANN	1945	28:30	OK
WILLIAM V. VANDERBILT	1945	29:00	OK
CHARLES W. WATSON	1945	29:30	OK
EDWARD X. XENOPHON	1945	30:00	OK
FRANK Y. YOUNG	1945	30:30	OK
ALICE Z. ZIMMERMAN	1945	31:00	OK
JOHN A. ADAMS	1945	31:30	OK
MARY B. BAKER	1945	32:00	OK
WILLIAM C. CAMPBELL	1945	32:30	OK
CHARLES D. DAVIS	1945	33:00	OK
EDWARD E. EVANS	1945	33:30	OK
FRANK F. FOSTER	1945	34:00	OK
ALICE G. GIBSON	1945	34:30	OK
JOHN H. HENRY	1945	35:00	OK
MARY I. IRVING	1945	35:30	OK
WILLIAM J. JACKSON	1945	36:00	OK
CHARLES K. KEENE	1945	36:30	OK
EDWARD L. LAMB	1945	37:00	OK
FRANK M. MITCHELL	1945	37:30	OK
ALICE N. NICHOLS	1945	38:00	OK
JOHN O. O'BRIEN	1945	38:30	OK
MARY P. PETERSON	1945	39:00	OK
WILLIAM Q. QUINN	1945	39:30	OK
CHARLES R. ROSS	1945	40:00	OK
EDWARD S. SMITH	1945	40:30	OK
FRANK T. TAYLOR	1945	41:00	OK
ALICE U. UHLMANN	1945	41:30	OK
JOHN V. VANDERBILT	1945	42:00	OK
MARY W. WATSON	1945	42:30	OK
WILLIAM X. XENOPHON	1945	43:00	OK
CHARLES Y. YOUNG	1945	43:30	OK
EDWARD Z. ZIMMERMAN	1945	44:00	OK
FRANK A. ADAMS	1945	44:30	OK
ALICE B. BAKER	1945	45:00	OK
JOHN C. CAMPBELL	1945	45:30	OK
MARY D. DAVIS	1945	46:00	OK
WILLIAM E. EVANS	1945	46:30	OK
CHARLES F. FOSTER	1945	47:00	OK
EDWARD G. GIBSON	1945	47:30	OK
FRANK H. HENRY	1945	48:00	OK
ALICE I. IRVING	1945	48:30	OK
JOHN J. JACKSON	1945	49:00	OK
MARY K. KEENE	1945	49:30	OK
WILLIAM L. LAMB	1945	50:00	OK
CHARLES M. MITCHELL	1945	50:30	OK
EDWARD N. NICHOLS	1945	51:00	OK
FRANK O. O'BRIEN	1945	51:30	OK
ALICE P. PETERSON	1945	52:00	OK
JOHN Q. QUINN	1945	52:30	OK
MARY R. ROSS	1945	53:00	OK
WILLIAM S. SMITH	1945	53:30	OK
CHARLES T. TAYLOR	1945	54:00	OK
EDWARD U. UHLMANN	1945	54:30	OK
FRANK V. VANDERBILT	1945	55:00	OK
ALICE W. WATSON	1945	55:30	OK
JOHN X. XENOPHON	1945	56:00	OK
MARY Y. YOUNG	1945	56:30	OK
WILLIAM Z. ZIMMERMAN	1945	57:00	OK
CHARLES A. ADAMS	1945	57:30	OK
EDWARD B. BAKER	1945	58:00	OK
FRANK C. CAMPBELL	1945	58:30	OK
ALICE D. DAVIS	1945	59:00	OK
JOHN E. EVANS	1945	59:30	OK
MARY F. FOSTER	1945	60:00	OK
WILLIAM G. GIBSON	1945	60:30	OK
CHARLES H. HENRY	1945	61:00	OK
EDWARD I. IRVING	1945	61:30	OK
FRANK J. JACKSON	1945	62:00	OK
ALICE K. KEENE	1945	62:30	OK
JOHN L. LAMB	1945	63:00	OK
MARY M. MITCHELL	1945	63:30	OK
WILLIAM N. NICHOLS	1945	64:00	OK
CHARLES O. O'BRIEN	1945	64:30	OK
EDWARD P. PETERSON	1945	65:00	OK
FRANK Q. QUINN	1945	65:30	OK
ALICE R. ROSS	1945	66:00	OK
JOHN S. SMITH	1945	66:30	OK
MARY T. TAYLOR	1945	67:00	OK
WILLIAM U. UHLMANN	1945	67:30	OK
CHARLES V. VANDERBILT	1945	68:00	OK
EDWARD W. WATSON	1945	68:30	OK
FRANK X. XENOPHON	1945	69:00	OK
ALICE Y. YOUNG	1945	69:30	OK
JOHN Z. ZIMMERMAN	1945	70:00	OK
MARY A. ADAMS	1945	70:30	OK
WILLIAM B. BAKER	1945	71:00	OK
CHARLES C. CAMPBELL	1945	71:30	OK
EDWARD D. DAVIS	1945	72:00	OK
FRANK E. EVANS	1945	72:30	OK
ALICE F. FOSTER	1945	73:00	OK
JOHN G. GIBSON	1945	73:30	OK
MARY H. HENRY	1945	74:00	OK
WILLIAM I. IRVING	1945	74:30	OK
CHARLES J. JACKSON	1945	75:00	OK
EDWARD K. KEENE	1945	75:30	OK
FRANK L. LAMB	1945	76:00	OK
ALICE M. MITCHELL	1945	76:30	OK
JOHN N. NICHOLS	1945	77:00	OK
MARY O. O'BRIEN	1945	77:30	OK
WILLIAM P. PETERSON	1945	78:00	OK
CHARLES Q. QUINN	1945	78:30	OK
EDWARD R. ROSS	1945	79:00	OK
FRANK S. SMITH	1945	79:30	OK
ALICE T. TAYLOR	1945	80:00	OK
JOHN U. UHLMANN	1945	80:30	OK
MARY V. VANDERBILT	1945	81:00	OK
WILLIAM W. WATSON	1945	81:30	OK
CHARLES X. XENOPHON	1945	82:00	OK
EDWARD Y. YOUNG	1945	82:30	OK
FRANK Z. ZIMMERMAN	1945	83:00	OK
ALICE A. ADAMS	1945	83:30	OK
JOHN B. BAKER	1945	84:00	OK
MARY C. CAMPBELL	1945	84:30	OK
WILLIAM D. DAVIS	1945	85:00	OK
CHARLES E. EVANS	1945	85:30	OK
EDWARD F. FOSTER	1945	86:00	OK
FRANK G. GIBSON	1945	86:30	OK
ALICE H. HENRY	1945	87:00	OK
JOHN I. IRVING	1945	87:30	OK
MARY J. JACKSON	1945	88:00	OK
WILLIAM K. KEENE	1945	88:30	OK
CHARLES L. LAMB	1945	89:00	OK
EDWARD M. MITCHELL	1945	89:30	OK
FRANK N. NICHOLS	1945	90:00	OK
ALICE O. O'BRIEN	1945	90:30	OK
JOHN P. PETERSON	1945	91:00	OK
MARY Q. QUINN	1945	91:30	OK
WILLIAM R. ROSS	1945	92:00	OK
CHARLES S. SMITH	1945	92:30	OK
EDWARD T. TAYLOR	1945	93:00	OK
FRANK U. UHLMANN	1945	93:30	OK
ALICE V. VANDERBILT	1945	94:00	OK
JOHN W. WATSON	1945	94:30	OK
MARY X. XENOPHON	1945	95:00	OK
WILLIAM Y. YOUNG	1945	95:30	OK
CHARLES Z. ZIMMERMAN	1945	96:00	OK
EDWARD A. ADAMS	1945	96:30	OK
FRANK B. BAKER	1945	97:00	OK
ALICE C. CAMPBELL	1945	97:30	OK
JOHN D. DAVIS	1945	98:00	OK
MARY E. EVANS	1945	98:30	OK
WILLIAM F. FOSTER	1945	99:00	OK
CHARLES G. GIBSON	1945	99:30	OK
EDWARD H. HENRY	1945	100:00	OK

STA'N	MO.	YR.	X = GOOD DAY	. = BAD DAY
4480	OCT	1940	XXXXXXXXXXXXXXXXXXXX.....	
4480	APR	1941	XXXX.X.XX..XXXXXXXXXXXXXXXXXXXX	
4480	MAY	1941	XXXXXXXXXXXXXXXXXXXX..XXXXXXXXXXXX..XX	
4480	JUNE	1941	.XXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXX..	
4480	JULY	1941	XXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXX	
4480	AUG	1941	XXXXX.XXXXXXXXXXXXXXXXXXXXXX.XX..XX	
4480	SEPT	1941	X...XXXXX..XXX.XXXXXXXXXX.....	
4480	OCT	1941	XXXXXXXXXXXXXXXXXXXX	
4480	APR	1942	XXXXX..XXXXXXXXXXXXXXXXXXXX	
4480	MAY	1942	XXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXXXX.....	
4480	JUNE	1942	XX.....XXX.XXX..X.XXXXXX.....X	
4480	JULY	1942	XXXXXXXXXXXXX.XXXX.XXXXXX.X..XXXX.	
4480	AUG	1942	XXXXX.XXXXXX..XXXXXXXXXX.XX.XXXXX..	
4480	SEPT	1942	XXXXXXXXXXXXXXXXXXXXX.....XXXXXXXXXXXX	
4480	OCT	1942	XXXXXXXXXXXXXXXXXXXX.XXXXXXXXXX...X.....	
4480	APR	1943	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
4480	MAY	1943	XXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXX	
4480	JUNE	1943	XXX.	
4480	JULY	1943	XXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXXXX	
4480	AUG	1943	XXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
4480	SEPT	1943	.XX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
4480	OCT	1943	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXX..	
4480	APR	1944	...XX..XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
4480	MAY	1944	XXXXXXXXXXXXX.XX.....XXXXXX..	
4480	JUNE	1944	XX..XXXXXXXXX...XXXXXXXXXXXXX.XXXX	
4480	JULY	1944	XXX.X.X..XXXXXXXXXXXXXXXXXXXXX.XXXXXX	
4480	AUG	1944	XXXXXXXXX..XXXXXX.XXXXXXXX...X.XXX	
4480	SEPT	1944	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..	
4480	OCT	1944	...XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
4480	APR	1945	XXXXXXXXX.X..XX	
4480	MAY	1945	XXXXX.XXXXXXXXXXXXX..X...XXXXXXXXXXXXX	
4480	JUNE	1945	XXXXXXXXXXXXX.XXXXXX.XXXXXXXXXX...XX	
4480	JULY	1945	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX	
4480	AUG	1945	XXXXXXXXX.X..XXXXXXXXXXXXXXXXXXXXX.XXXXXX	
4480	SEPT	1945	XXXXXXXXXX.XX.XXXX.....	
4480	OCT	1945	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXX.XXX..	
4480	APR	1946	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.	
4480	MAY	1946	XXXXXXXXXXXXXXXXXXXXX.X.XXXXXXXXXXXXXX..	
4480	JUNE	1946	XXXXX..XXXXXXXXXXXXXXXXXXXXX..XXXXXX	
4480	JULY	1946	XX.XXXX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.	
4480	AUG	1946	XXXXXX..XXXXX.....XXXXXX.XXXXXXX	
4480	SEPT	1946	XXX.....XXXXXXXXXXXXX..XX..XXXX	
4480	OCT	1946	.....	
4480	APR	1947	XX.XXXXXX.....XXXXX.X	
4480	MAY	1947	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX	
4480	JUNE	1947	.X...XXXXXX..X..XXXXX.....XX	
4480	JULY	1947	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
4480	AUG	1947	XXX.....XXXXXXXXXXXXXXXXXXXXX...XXXXX.X	
4480	SEPT	1947	XXXXXXXXXXXXXXXXXXXXX.XX.....	
4480	OCT	1947	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX	
4480	APR	1948	XXXXXXXXXX.XXXX	

STA'N MO. YR. X = GOOD DAY . = BAD DAY

4480	MAY	1948	XXXXXXXXX.XXXXXXXXXXXXXX..XXXXXXXXXX
4480	JUNE	1948	XXXXXXXXXX..XXXXXXXXXXXXXXX.XXXXXXXX
4480	JULY	1948	XXXXXXXXXXXXX.XXXX.XXX.XXXXXX...XX
4480	AUG	1948	XXXXXXXXXXXXX.X.XXXXXXXXXXXXXXXXXXXXXX
4480	SEPT	1948	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXX
4480	OCT	1948	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXX
4480	APR	1949	...XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.X
4480	MAY	1949	XXXXXXXXXXXXXXXXXXXXX..XXX..X.XXXXXX..
4480	JUNE	1949	.XXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXX.XXXX
4480	JULY	1949	XXXXXXXXXXXXXX.XXXXXXX..XXXXXXXXXXXXXX
4480	AUG	1949	XXXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXX
4480	SEPT	1949	X.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	OCT	1949	XXXXXXXXXX..XXXXXX.....
4480	APR	1950	XXXXXXXXXX.XXXXXXXX
4480	MAY	1950	XXXXXXXXXXXXXXXXXX.XXXXXXXX.XXXXXXXX
4480	JUNE	1950	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX...XXXX
4480	JULY	1950	XXXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXXX...
4480	AUG	1950	XXXXX.....XXXXXXXXXXXXXXXXXXXXX...XX
4480	SEPT	1950	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.
4480	OCT	1950	.XXX.....
4480	APR	1951	XXX.XXX..X.....XXXXX
4480	MAY	1951	X...XXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
4480	JUNE	1951	XXX.....XXXXXX.XXX..X.....XX
4480	JULY	1951	XXXXXXXXX..XXXXXXXXXXXXXXXXXXXXXXXXXX
4480	AUG	1951	XXXXXXXXXX.XX...X..XXXXXX.....
4480	SEPT	1951	XXX.X.....XXXX.XX.....
4480	OCT	1951	XXXX.....
4480	APR	1952	X...XXXXXXXXXXXXXXXXXXXXXXXXXX
4480	MAY	1952	X.....XXXXXXXXX.XXXXXXXXXXXXXXXXXXX.XX
4480	JUNE	1952	.XXXXX.XXX...XXXXXXXXXX...XX....
4480	JULY	1952	XXXXXXXXXXXXX.XXXX.X.....XXXXXXXXXXXXX
4480	AUG	1952	XXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXX...
4480	SEPT	1952	.XXXXXXXXXXXXX...XX.....XXXXX.XXX
4480	OCT	1952	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXXX
4480	APR	1953	X.....XX..
4480	MAY	1953	XXXXX..XXXXXXXXXX...XXX.....
4480	JUNE	1953	XXXXXX.XXXXXXXXXXX.XXXXXX.XX
4480	JULY	1953	.XXXXXXXXXXXXXX.XXXXXXXXXXXXXX.X.XXXX
4480	AUG	1953	XXXXXXXXXX.XXXXXXXXXXXXXX.XXX...XXXXX
4480	SEPT	1953	...XXXXXXXXXXXXXXXXXXXXX.XXX.XXXXXXX
4480	OCT	1953	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	APR	1954	XXXXXX.....
4480	MAY	1954	XXXXX...XXXXXXXXXXXXXXXXXXXXX
4480	JUNE	1954	.XXXXXXXXXX...XXXXXXXXXXXXXXXXXX..X.X
4480	JULY	1954	.XXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXXX.XX
4480	AUG	1954	XXXXXXXXXXXXX.XXXXXXXXXXXXXX.XXX...XXX
4480	SEPT	1954	XXXXX.XXXXXX.XXX.....XXXXX...
4480	OCT	1954	X..XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	APR	1955	XXXXXX.XXXXXXXXXXXXXX.....
4480	MAY	1955	XXXXXXXXXX.....X.....XXXXXX
4480	JUNE	1955	XXXXXXXXXXXXXXXXXX.X..XXXXXXXXXXXXX.X

STA'N MO. YR. X = GOOD DAY . = BAD DAY

4480	JULY	1955	.XX.....XX...XXXX.XXXXXXXXXXXXXXXXXX
4480	AUG	1955	XX
4480	SEPT	1955	XXXXXXXXXXXXXXXXXXXXXXXXXX...XXXXXXXX
4480	OCT	1955	XX..
4480	APR	1956	XXXXXXXXXXXXXXXXXXXXX.....
4480	MAY	1956	XXXXXXXXXXXXXXXXXXXXX.....XXX
4480	JUNE	1956	XXXXXXXXXXXXXXXXX...XX..XXXXXXXX.
4480	JULY	1956	XXXXXX.XXXXXXXXXXX..XXXXXX
4480	AUG	1956	..XXXXXXXX..XXXXXXXXXXXXXXXXXXXXX...X
4480	SEPT	1956	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.....X...X
4480	OCT	1956	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX...XX.....
4480	APR	1957	XXXXXXXX..XXXX
4480	MAY	1957	XX
4480	JUNE	1957	XXXXXXXXXX.XX..XXXXXXXXXXXXXXXXXXXXX
4480	JULY	1957	XXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXX
4480	AUG	1957	XXXXXXXXXX..XXXX.XXXXXXXXXXXXXXXXXXX.
4480	SEPT	1957	XX..XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	OCT	1957	XX.....XXXXXXXXXX.....
4480	APR	1958	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	MAY	1958	XXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXXXXXXXXXX
4480	JUNE	1958	.XXXXXXXXX.XXXX.XXXXXXXXXXXXXXXXXXXXXX
4480	JULY	1958	XXXXXXXXXXXXX..XXXXXXXXXX..XXXXXXXXXX
4480	AUG	1958	XXXXXXXXXXXXX.XXXXXXX.XXXXXX.....X
4480	SEPT	1958	XXXXXXXXXXXXXXXXX.....X.....
4480	OCT	1958	..XXXXXX.....XXXXXXXXXXXXXXXXXXXXX
4480	APR	1959	XX.XXXXXXXXXX.....XXXX
4480	MAY	1959	XXXXX..XXXXXXXXXXXXXXXXXXXXX.XXXXXX
4480	JUNE	1959	XXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXX..XX
4480	JULY	1959	XXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
4480	AUG	1959	XXXXXXXXXXXXXXXXXXXXX.XXX..XXXXXXXXXXXXX
4480	SEPT	1959	XXXXXX..XXXXXX.....XXXX....
4480	OCT	1959	.XXXXX.....
4480	APR	1960	XXXXXXXXXXXXXXXXXXXXX.....
4480	MAY	1960	XXXXXXXXX.XXXX.XXXX.X.XXXXXX
4480	JUNE	1960	XX.
4480	JULY	1960	.XXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
4480	AUG	1960	.X..XXXXXXXXXXXXXXXXXXXXX...XXXXXX
4480	SEPT	1960	XX
4480	OCT	1960	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX....
4480	APR	1961	..XXXXXX..X...XXXXX.XXXX..XXX
4480	MAY	1961	X.XXX..XX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	JUNE	1961	XXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXX.X
4480	JULY	1961	XXXXXXXXXXXXXXXXXXXXX.XXXXXX.X.XX..XX
4480	AUG	1961	XXXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	SEPT	1961	XX
4480	OCT	1961	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.....
4480	APR	1962	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	MAY	1962	XXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX.X
4480	JUNE	1962	XXXXXXXXXXXXX.....XXXXXXXXXXXXXXXXXXXXX
4480	JULY	1962	XXXXXXXXXXXXX..X.:XXXXXXXXXX..XX
4480	AUG	1962	XX

STA'N MD. YR. X = GOOD DAY . = BAD DAY

4480	SEPT	1962	X.XXXX.....XXXXXXXXXXXXXXXXXX
4480	OCT	1962	XXXXXXXXXXXXX.X..XXXXX.....XXXXXX
4480	APR	1963	X..XXXXXXXXX.XXX..XXXXXXXXXX
4480	MAY	1963	XXXXXXXXXX.X.XXXXXXXXXXXXXXXXXX..XXXX
4480	JUNE	1963	XXX.XX.....XXXXXXXXXXXXX....XXX...
4480	JULY	1963	.XXXXXXXXXX.XXX.XXXXXXXXXXX.XXXXXXX
4480	AUG	1963	.XXXXXXXXXX.XXXXXXXXXXXXXXXXXX..XXXXX
4480	SEPT	1963	XXXXXXXXXXXXXXXXX.....XXXXXXXXXXXXX
4480	OCT	1963	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	APR	1964	XXXXXXXXXX..XX..X.XX..XXX
4480	MAY	1964	XX.....XXXXXXXXXXXXXXXXXXXXXXXXXX
4480	JUNE	1964	XXXXXXXXXXXXXXXXXX.XXX.XXXXXXXXXXX
4480	JULY	1964	X.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	AUG	1964	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XX.XX
4480	SEPT	1964	X.....XXXXXXXXXXXXX.....
4480	OCT	1964	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	APR	1965	X.....XXX.XXXXXXXXXXX
4480	MAY	1965	XXXXXXXXXXXXXXXXXXXXX.XX.....XXXXXX
4480	JUNE	1965	XX.XXXXXXXXXX...X.....XXXXX...XX.
4480	JULY	1965	XXXXXX...XXXXXXXXXXXXX.XXXXXXXXXXX
4480	AUG	1965	XXXXX.XXXXXXXXXXXXXXXXXXXXXX..XX....
4480	SEPT	1965	XX...XXXXXXXXX.....
4480	OCT	1965	.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	APR	1966	XXXXX.....XXXXX.....
4480	MAY	1966	.XXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXXX.X
4480	JUNE	1966	.X....XX....XXXXXXXXXXXXX...XXXX
4480	JULY	1966	XX.XXXXXXXXXXX.XXXXXXXXXXXXXX..XXXXX
4480	AUG	1966	XXXXXX.XXXXXXXXXXXXXX...XXXXXXXXXX
4480	SEPT	1966	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..
4480	OCT	1966	XXXXXXXXXXXXX.....XXXXXXXXXXXXX
560	APR	1922	...XX.....XXXXXXXXXXXXXXXXXX
560	MAY	1922	XXXXXXXXX.....XXXXX.....XXXXXXXXXXXXX
560	JUNE	1922	XXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
560	JULY	1922	XXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXXX
560	AUG	1922	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXXX
560	SEPT	1922	XX..XX..XXX.....XXXXXXXXXXXXX...
560	OCT	1922	.....
560	APR	1923	XX.XXXXXXXXXXXXXX
560	MAY	1923	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
560	JUNE	1923	XXXXXXXXXX.X.X.XXXXXXXXXXXXXXXXXXX
560	JULY	1923	XX.....XXXXXXXXXXXXX..XXXXXXX..X.
560	AUG	1923	X.XXXXXX.XXXXXXXXXXXXXX.X..XXXXX
560	SEPT	1923	XXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXX
560	OCT	1923	XXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXX
560	APR	1924	XXXX
560	MAY	1924	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXXX
560	JUNE	1924	XXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXX
560	JULY	1924	XXXXXXXXXXXXXXXXXX...XXXXXXX.XXXXXX
560	AUG	1924	XX.XXXXXXXX.XX.....X...
560	SEPT	1924	XX.XXXX.XXXXXXXXXXXXXX.....
560	OCT	1924	.....

STA'N MO. YR. X = GOOD DAY . = BAD DAY

560	APR	1925	.....
560	MAY	1925	..XXXXXXXXXXXX.XXXXXXXXXXXXXXXXXX.XX
560	JUNE	1925	XXXXXXXX.XXXXXXXXXXXXXXXXXX.XXXXXXXXX
560	JULY	1925	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXX
560	AUG	1925	XXXXXXXXX..XXX.....XXX..X..X.....
560	SEPT	1925	.X.....XXXXXXXXXXXX
560	OCT	1925	XXX.....XXXXXXXXXXXXXXXXX.....
560	APR	1926	X.XX.XX.....XXXXXXXX
560	MAY	1926	XXXXXXXXX.XXXXXXXXXXXXXX..XXXXXXXXXXXXX
560	JUNE	1926	XXXXXXXXX.....XX.....XXX.XXXXXXXXX
560	JULY	1926	XXX..XXXXXXXXXXXXX.XXXXXX.X.XXXXX
560	AUG	1926	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXXXX.
560	SEPT	1926	.XXXX..X.....
560	OCT	1926	.....
560	APR	1927	.....
560	MAY	1927	XXXXXXXXXXXXX.XXXXXX.....X
560	JUNE	1927	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.X.....X.X
560	JULY	1927	X.....XXXXX..XXXXXXXXXXXXXXXXXX.
560	AUG	1927	XXXXX.XXXXXXXXXXXXXX.XXXXXXXXXXXXXX
560	SEPT	1927	.X.XX.XXXX.....
560	OCT	1927	.....
560	APR	1928	XXXXXXXXXX
560	MAY	1928	XXXXXXXXXXXXX.XXXXXXXXXXXXXX.XXXX
560	JUNE	1928	XX.XXX.XXXXXXXXXX..XXXXXXXXXXXXXXXX
560	JULY	1928	XXX..XXXXXXXXXXXXX..XXXXXXXXXXXXXXXXX.
560	AUG	1928	.XXXXXXXXXX.XXX..X.XXXXXX.....XXXXX
560	SEPT	1928	XXXXX..XXXXXXXXXXXXX..XXXXXXXXXXXXX
560	OCT	1928	X.....
560	APR	1929	XXXXX
560	MAY	1929	XX.XXXXXXXXXX.....XXXXXXXXXXXXX..XXX
560	JUNE	1929	XXXXXXXXXXXXX.X.....XXX.XXXX.XXXX
560	JULY	1929	XXXXXXXXXXXXX..XXXXXXXXXX..XXX.XXXXX
560	AUG	1929	XXX.XXXX.XXXXXXXXXXXXXXXXXXXXXXXXXX.
560	SEPT	1929	XXX.XXXXXXXXXXXXXX.....
560	OCT	1929	.....
560	APR	1930	X.XXXXXX
560	MAY	1930	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.....XXX
560	JUNE	1930	XXXXXXXXXXXXX.X.....XXX.XXXX
560	JULY	1930	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.X.....XXX
560	AUG	1930	X.XXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX..X
560	SEPT	1930	XXXXX.....
560	OCT	1930	...XX.....
560	APR	1931	XXXXXXXXXX
560	MAY	1931	X.XXXXXXXXXXXXXXXXXX.....XXXXXXXXXXXXX
560	JUNE	1931	XXXXXXXXXXXXX.XXXXXX..XXXXXXXXXXXXX
560	JULY	1931	XXXXXXXXXXXXX.XX..XXXXXXXXXXXXXXXXXXXXX
560	AUG	1931	XX..XXXXXXXXXXXXXXXXXXXXX.XXXXXX..X.XX
560	SEPT	1931	XXXXX.....
560	OCT	1931	.....
560	APR	1932	X
560	MAY	1932	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.X..XXXXXX

STA'N MO. YR. X = GOOD DAY . = BAD DAY

560	JUNE	1932	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
560	JULY	1932	XXXX.XXXX..XXXXXXXXXXXXXXXXXX.XX..XX
560	AUG	1932	XXXXXXXXXXXXX...XXXXXXXXXXXXXXXXXX...
560	SEPT	1932	XXXXXXXXXXXXXXXXXXXXX.....XX
560	OCT	1932	XXXXXXXXXX.....
560	APR	1933	.....
560	MAY	1933	.XXXXX.....XXXXXXXXXXXXXXXXXXXXX.XX.XX
560	JUNE	1933	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX...XXXXX
560	JULY	1933	XXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXX.....
560	AUG	1933	..XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.
560	SEPT	1933	X.....XXXXXX..X...X.....
560	OCT	1933	.....
560	APR	1934	XXXXXXXXX..X
560	MAY	1934	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..
560	JUNE	1934	...XXXXXXXXXX..XXXXXXXXX.XXX....
560	JULY	1934	XXXXXXXXXXXXX...XXXXX.....XXXXXX.X
560	AUG	1934	XX.XX.....XXXXXXX..XXXXXX..
560	SEPT	1934	XXXXXXXXXXXXX.....
560	OCT	1934	.....
560	APR	1935	.....
560	MAY	1935	X.....XX.....XX.....XXXXX
560	JUNE	1935	XX..XXXXXXXXXXXXXXXXXX..X.XXXXXXX.
560	JULY	1935	...XX.....XXXXXXXXXXXXXXXXX.X..X.XXX
560	AUG	1935	XXX..XXXXXXX.....XXXXX..XXXXXXX
560	SEPT	1935	XXX.XXXXXX.....
560	OCT	1935	XXXXXXXXXXXXX.....
560	APR	1936	XX
560	MAY	1936	XXXXX.....XXXXXX.XX.XXXXXXXXXXXXXX
560	JUNE	1936	XXX..X.XXX..XX.....XXXXXX.....
560	JULY	1936	XXXXXX.XXXXXXXXXXXXXXXXXX..XXXXX
560	AUG	1936	XXXXXXXXXXXXX..XXX.XX.....XXXXXX
560	SEPT	1936	XXXXXXXXXXXXX.....
560	OCT	1936	.....
560	APR	1937	.....
560	MAY	1937	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXX
560	JUNE	1937	XXXXXXXXXXXXXXXXXXXXX.XXXX..XXXXXX
560	JULY	1937	XX..XXXXXXXXXX.XXX.....XXXXXXXXXXXXX
560	AUG	1937	XXXXXXXXXXXXX.....X.....
560	SEPT	1937	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX...
560	OCT	1937	.....
560	APR	1938	XXXXX
560	MAY	1938	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
560	JUNE	1938	XXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX..
560	JULY	1938	XXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXXX
560	AUG	1938	XXXXX.....XXXXXX..XXX.X.XXXXXXXXXX
560	SEPT	1938	XXXXX.....XXXXXXXXXXXXXXXXXXXXXXXXXX
560	OCT	1938	XXX.....
560	APR	1939	XXXXXXXXXXXXX
560	MAY	1939	XXXXXXXXXXXXXXXXXXXXX.XX.XXXXXXXX.XX.
560	JUNE	1939	XXXXXXXXXXXXX..XXXXXXXXXXXXX.XXX.XXX
560	JULY	1939	XXXXXXXXXXXXXXXXXXXXX.....XXXXXXXXXXXXX

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17	18	19	20
21	22	23	24
25	26	27	28
29	30	31	32
33	34	35	36
37	38	39	40
41	42	43	44
45	46	47	48
49	50	51	52
53	54	55	56
57	58	59	60
61	62	63	64
65	66	67	68
69	70	71	72
73	74	75	76
77	78	79	80
81	82	83	84
85	86	87	88
89	90	91	92
93	94	95	96
97	98	99	100

STA'N	MO.	YR.	X = GOOD DAY	. = BAD DAY
560	AUG	1939	XXX.XXXXXX.XXXXXXXXXXXXXX.XX....	
560	SEPT	1939	.....	
560	OCT	1939	.....	
560	APR	1940	.....	
560	MAY	1940	..XXXXXXXXXXXXXXXXXXXXXXXXX.XXXX.	
560	JUNE	1940	XXXXXXXXXXXXX.XXXXXX.X.XXXXXXXX.	
560	JULY	1940	XXXXXXXXXX..XXXXX..XXXXX.XXX.XXXX	
560	AUG	1940	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
560	SEPT	1940	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX.	
560	OCT	1940	...XXXXXXXXXXXXXXXXXX.....	
560	APR	1941	XXXXX.....XXXXXXXXXXXXX	
560	MAY	1941	.X.X..XXXXX.....XXXXXXXXXXXXXXXXX.XXX	
560	JUNE	1941	XXXXXXXXXXXXXXXXXXXXX.XXX..XXXXX..XXX.	
560	JULY	1941	XXXXXXXXXX..XXXXXXXXXXXXXXXXX.X.....	
560	AUG	1941	.X.....XXXXXXX..XXXXXXXXX....XX...	
560	SEPT	1941	.....	
560	OCT	1941	.....	
560	APR	1942	XXXXX	
560	MAY	1942	XXXXXXXXXXXXXXXXX..XXXXXXXXXXXXX....XX	
560	JUNE	1942	XXXXXXXXXX.....XXX.....XXX.XXXXXX	
560	JULY	1942	XXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XX.	
560	AUG	1942	XXXXXXXXXXXXXXXXXXXXX..XXXXXX.....	
560	SEPT	1942	...X.XX.....XXXXX	
560	OCT	1942	XXXXXXXXXXXXXXXXXXXXX.....X.....	
560	APR	1943	XXXXXXXXXXXXXXXXXXXXX	
560	MAY	1943	XXXXX.....XX..XXXXXXXXXXXXX.....	
560	JUNE	1943	X.....XXXXXXXXXX.....XXXXXX	
560	JULY	1943	XXXXXXXXX.XX.X..XXXXXXXXXXXXXXXXXXXXX..	
560	AUG	1943	XXXXXX..XXXXX..XX...XXX	
560	SEPT	1943	.XX..XXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
560	OCT	1943	XXXXXXXXXXXXX..XXXXX.....	
560	APR	1944	XXXXX.....XXXXXXXXX	
560	MAY	1944	XXXXXXXXXXXXXXXXXXXXX.....XXXXXX	
560	JUNE	1944	X.....XXXXXX.....XXXXXXX.XXXXXX	
560	JULY	1944	XXXXX.XX.XXXXXXXXXXXXXXXXXXXXXXXXXX.X	
560	AUG	1944	XXXXXXXXXXXXX.XXX.XXXXXXXXXXXXXXXXXX.	
560	SEPT	1944	XXXXXXXXXXXXXXXXX.....	
560	OCT	1944	.....	
560	APR	1945	.....	
560	MAY	1945	..XXXXXXXXXXXXXXXXXXXXX.XXXX....XXXXX.	
560	JUNE	1945	XXXXXXXXXXXXX.XXXXXXXXXXXXXX.....X	
560	JULY	1945	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX.XX	
560	AUG	1945	XXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXXX	
560	SEPT	1945	XXX.XXXXXXXXXXXXXX.X.....	
560	OCT	1945	.....	
560	APR	1946	XXXXX	
560	MAY	1946	XXXXXXXXXXXXXXXXXXXXX..XXXXXX....X	
560	JUNE	1946	XXXXX.XXXXXXXXXX.XXXXXXXXXX..X.XX	
560	JULY	1946	X.XXXXXXXXXXX..XXXXXXXXXXXXXXXXX.XXX	
560	AUG	1946	XXXXX.XXXXXX.XXX..XXXXXXXXXXXXXXXXXX	
560	SEPT	1946	XXX..XXXXXXXXXXXXX.....	

Table 1. Summary of the data collected during the 1990-1991 season.

Location	Number of birds	Number of eggs	Number of chicks
1. Lake Michigan	100	100	100
2. Lake Huron	100	100	100
3. Lake Erie	100	100	100
4. Lake Ontario	100	100	100
5. Lake St. Clair	100	100	100
6. Lake Michigan	100	100	100
7. Lake Huron	100	100	100
8. Lake Erie	100	100	100
9. Lake Ontario	100	100	100
10. Lake St. Clair	100	100	100
11. Lake Michigan	100	100	100
12. Lake Huron	100	100	100
13. Lake Erie	100	100	100
14. Lake Ontario	100	100	100
15. Lake St. Clair	100	100	100
16. Lake Michigan	100	100	100
17. Lake Huron	100	100	100
18. Lake Erie	100	100	100
19. Lake Ontario	100	100	100
20. Lake St. Clair	100	100	100
21. Lake Michigan	100	100	100
22. Lake Huron	100	100	100
23. Lake Erie	100	100	100
24. Lake Ontario	100	100	100
25. Lake St. Clair	100	100	100
26. Lake Michigan	100	100	100
27. Lake Huron	100	100	100
28. Lake Erie	100	100	100
29. Lake Ontario	100	100	100
30. Lake St. Clair	100	100	100
31. Lake Michigan	100	100	100
32. Lake Huron	100	100	100
33. Lake Erie	100	100	100
34. Lake Ontario	100	100	100
35. Lake St. Clair	100	100	100
36. Lake Michigan	100	100	100
37. Lake Huron	100	100	100
38. Lake Erie	100	100	100
39. Lake Ontario	100	100	100
40. Lake St. Clair	100	100	100
41. Lake Michigan	100	100	100
42. Lake Huron	100	100	100
43. Lake Erie	100	100	100
44. Lake Ontario	100	100	100
45. Lake St. Clair	100	100	100
46. Lake Michigan	100	100	100
47. Lake Huron	100	100	100
48. Lake Erie	100	100	100
49. Lake Ontario	100	100	100
50. Lake St. Clair	100	100	100
51. Lake Michigan	100	100	100
52. Lake Huron	100	100	100
53. Lake Erie	100	100	100
54. Lake Ontario	100	100	100
55. Lake St. Clair	100	100	100
56. Lake Michigan	100	100	100
57. Lake Huron	100	100	100
58. Lake Erie	100	100	100
59. Lake Ontario	100	100	100
60. Lake St. Clair	100	100	100
61. Lake Michigan	100	100	100
62. Lake Huron	100	100	100
63. Lake Erie	100	100	100
64. Lake Ontario	100	100	100
65. Lake St. Clair	100	100	100
66. Lake Michigan	100	100	100
67. Lake Huron	100	100	100
68. Lake Erie	100	100	100
69. Lake Ontario	100	100	100
70. Lake St. Clair	100	100	100
71. Lake Michigan	100	100	100
72. Lake Huron	100	100	100
73. Lake Erie	100	100	100
74. Lake Ontario	100	100	100
75. Lake St. Clair	100	100	100
76. Lake Michigan	100	100	100
77. Lake Huron	100	100	100
78. Lake Erie	100	100	100
79. Lake Ontario	100	100	100
80. Lake St. Clair	100	100	100
81. Lake Michigan	100	100	100
82. Lake Huron	100	100	100
83. Lake Erie	100	100	100
84. Lake Ontario	100	100	100
85. Lake St. Clair	100	100	100
86. Lake Michigan	100	100	100
87. Lake Huron	100	100	100
88. Lake Erie	100	100	100
89. Lake Ontario	100	100	100
90. Lake St. Clair	100	100	100
91. Lake Michigan	100	100	100
92. Lake Huron	100	100	100
93. Lake Erie	100	100	100
94. Lake Ontario	100	100	100
95. Lake St. Clair	100	100	100
96. Lake Michigan	100	100	100
97. Lake Huron	100	100	100
98. Lake Erie	100	100	100
99. Lake Ontario	100	100	100
100. Lake St. Clair	100	100	100

STA'N MO. YR. X = GOOD DAY . = BAD DAY

560	OCT	1946	.....
560	APR	1947	XXXXXX
560	MAY	1947	XXXXXXXXXX.XXXXXXXXXX.XXXXXXXXXXX..X
560	JUNE	1947	XXXXXXXXXX.XXXXXXXXXXXXXXXXXXX..XX
560	JULY	1947	XXXXX..XX.....XXX.X.....X..XX
560	AUG	1947	XXXXXXXXX....X.....XXXXXXXXXX
560	SEPT	1947	XXX.....X
560	OCT	1947	XX.XXXXXXXXXX.....
560	APR	1948	.....
560	MAY	1948	XXXXX..XXXXXXXXXXXXXXXXXXXX
560	JUNE	1948	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.X..XXXX
560	JULY	1948	XXXXX.....X...XXXXXXXXX.XXXXXXXXXXX
560	AUG	1948	XXX.....XX....XX.....XXX
560	SEPT	1948	XXXXXXXXXXXXXXXX.....
560	OCT	1948	.....
560	APR	1949	XXX
560	MAY	1949	XXXXXXXXXXXXXXXXXXXX.XXXXX.XXXX.X..XX
560	JUNE	1949	XXXXXXXXXX.XXXXXXXXXXXXX.XXXX.X...
560	JULY	1949	.XXXXX.XXXXXXXXXX...X.XX.XXXXXXXXXX
560	AUG	1949	XXXXXXXXX.X..XXX...XX.....XXXXXX
560	SEPT	1949	XX...XXX.XXXXXX..XXXXXXXXXXXXXX.X
560	OCT	1949	XX.....
560	APR	1950	X
560	MAY	1950	XXXXX..XXXXXXXXXXXXX.....XX.XXXX
560	JUNE	1950	XX...XXXXXXXXXXXXXXXXXXXXXXXXXXXX
560	JULY	1950	XXXXXXXXXX.XXXX..XXXXXXXXXXXXX.....XX
560	AUG	1950	XXXXX.....X...XXXXXXXXXXXXXXXXXX.
560	SEPT	1950	XX.XXXXXXXXXXXXXXXXXXXXXXXXXX.....
560	OCT	1950	.....
560	APR	1951	XXXXX
560	MAY	1951	XXXXXXXXXXXXXXXXXXXX.XXXX.XXX
560	JUNE	1951	XXXXXXXXXXXXXXXXXXXXX.XXX.XXXXXXXXXX
560	JULY	1951	X.X.....XXXXX.....XXXXX...X..
560	AUG	1951	.XX.X..XXXXXXXXXXXXXXXXX..XXXXX.....
560	SEPT	1951	XXXXXX.XXXXXXXXXXXXX.XX.....
560	OCT	1951	.....
560	APR	1952	XXXXXX
560	MAY	1952	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXX
560	JUNE	1952	XXXXXXXXXXXXX...XX.XXX.X.XXXXXXXXXX
560	JULY	1952	XXXXX.XXXXXXXXXXXXXX.....XXXXXXXXXX
560	AUG	1952	XXXXX..XXXXXXXXXXXXXXXXXXXXX.....
560	SEPT	1952	XXXXXXXXXXXXX.....
560	OCT	1952	XXXXXX.XX.XXXXXXXXXXXXX.XXXXXX
560	APR	1953	.....
560	MAY	1953	...XXX.....XXXXXXXXXXXXXXXXXXXXX..
560	JUNE	1953	XXXXXXXXX..XX.....X.X..XXX
560	JULY	1953	XXX.XXXXXXXXXXXXXX..XXXXXXXXX..XXXXX..
560	AUG	1953	..XXXXXXXXXXXXXXXXXXXXX..XXX.XXXXXX
560	SEPT	1953	..XXXXXXXXXXXXX.XXXXXX..XXXXXXX...
560	OCT	1953	.....
560	APR	1954	.....

STA'N MO. YR. X = GOOD DAY . = BAD DAY

560	MAY	1954	XXX.....XXXXXXXXXX.....XX
560	JUNE	1954	XXX.....XXXXXXXXXX.....XXXXXXXXXX
560	JULY	1954	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.....XXX
560	AUG	1954	X...XXXX...XXXXX.....XXXXXXXXXX.X
560	SEPT	1954	X.....XXXXX.....
560	OCT	1954	.....
560	APR	1955	.....
560	MAY	1955	...XXX..XXX.XXXXXXXXXXXXXXXXXXX...
560	JUNE	1955	.XXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXX
560	JULY	1955	X.XX...XXXXXXXX.XX..XXXXX.....
560	AUG	1955	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
560	SEPT	1955	XXXXXXXXXXXXXXXXXXXXX..X....XX.....
560	OCT	1955	.....
560	APR	1956	.....
560	MAY	1956	..XXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXXX
560	JUNE	1956	XXX.....X....XXXXXXXXXX..XX..XXX
560	JULY	1956	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.....XX
560	AUG	1956	XX....XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..X
560	SEPT	1956	...XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.....
560	OCT	1956	.....
560	APR	1957	XX
560	MAY	1957	X...XX.....XXXXXXXXXXXXXXXXXXXXX
560	JUNE	1957	XXXXXXXXXX.X...XXXXX...X.XXXXXXX
560	JULY	1957	X.XXX.....XXXXXXXXXXXXX..
560	AUG	1957	XXX.....XXXXX.....XXX
560	SEPT	1957	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
560	OCT	1957	.....
560	APR	1958	.....
560	MAY	1958	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XX
560	JUNE	1958	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.....
560	JULY	1958	.XXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX
560	AUG	1958	XX.XX.X.XXXXXXXXXXXXXXXXXXXXXXXXXXX.
560	SEPT	1958	...XXXXX.....
560	OCT	1958	.....
560	APR	1959	XXXXXXXXXX...XXX..
560	MAY	1959	XXXXXXXXXX..XXXXXXX
560	JUNE	1959	XXXXXXXXXXXXX.X..XXXXXX.XX.XXXXX
560	JULY	1959	X.XX.XXX.XXXXXXXXXXXXXXXXXXXXXX.XXXXXXX
560	AUG	1959	X.X.XX.XX.XXXXXXXXXXXXXXXXXXXXXX.X.....X
560	SEPT	1959	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XX.....
560	OCT	1959	.....
560	APR	1960	XXX
560	MAY	1960	.X..XXXXXXXXX..X.....XXXXXX
560	JUNE	1960	XXXXX.....XXXX.XX.....XXX..XXXX
560	JULY	1960	XXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXX
560	AUG	1960	XX.XXXXXXXXXXX..XXXXX...XXXXXXX
560	SEPT	1960	XXX.....XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
560	OCT	1960	XX..XXXXXXXXXXXXXXXXXXXXX..X..X.....
560	APR	1961	XX
560	MAY	1961	XXXXXXX.XXX.XXXX
560	JUNE	1961	XXXXXX.X.X....XXXXX.XXXXXX.....

TABLE 1. - SUMMARY OF DATA FOR THE 1950-1951 SEASON.

1. 1950-1951	1950	1951
2. 1950-1951	1950	1951
3. 1950-1951	1950	1951
4. 1950-1951	1950	1951
5. 1950-1951	1950	1951
6. 1950-1951	1950	1951
7. 1950-1951	1950	1951
8. 1950-1951	1950	1951
9. 1950-1951	1950	1951
10. 1950-1951	1950	1951
11. 1950-1951	1950	1951
12. 1950-1951	1950	1951
13. 1950-1951	1950	1951
14. 1950-1951	1950	1951
15. 1950-1951	1950	1951
16. 1950-1951	1950	1951
17. 1950-1951	1950	1951
18. 1950-1951	1950	1951
19. 1950-1951	1950	1951
20. 1950-1951	1950	1951
21. 1950-1951	1950	1951
22. 1950-1951	1950	1951
23. 1950-1951	1950	1951
24. 1950-1951	1950	1951
25. 1950-1951	1950	1951
26. 1950-1951	1950	1951
27. 1950-1951	1950	1951
28. 1950-1951	1950	1951
29. 1950-1951	1950	1951
30. 1950-1951	1950	1951
31. 1950-1951	1950	1951
32. 1950-1951	1950	1951
33. 1950-1951	1950	1951
34. 1950-1951	1950	1951
35. 1950-1951	1950	1951
36. 1950-1951	1950	1951
37. 1950-1951	1950	1951
38. 1950-1951	1950	1951
39. 1950-1951	1950	1951
40. 1950-1951	1950	1951
41. 1950-1951	1950	1951
42. 1950-1951	1950	1951
43. 1950-1951	1950	1951
44. 1950-1951	1950	1951
45. 1950-1951	1950	1951
46. 1950-1951	1950	1951
47. 1950-1951	1950	1951
48. 1950-1951	1950	1951
49. 1950-1951	1950	1951
50. 1950-1951	1950	1951
51. 1950-1951	1950	1951
52. 1950-1951	1950	1951
53. 1950-1951	1950	1951
54. 1950-1951	1950	1951
55. 1950-1951	1950	1951
56. 1950-1951	1950	1951
57. 1950-1951	1950	1951
58. 1950-1951	1950	1951
59. 1950-1951	1950	1951
60. 1950-1951	1950	1951
61. 1950-1951	1950	1951
62. 1950-1951	1950	1951
63. 1950-1951	1950	1951
64. 1950-1951	1950	1951
65. 1950-1951	1950	1951
66. 1950-1951	1950	1951
67. 1950-1951	1950	1951
68. 1950-1951	1950	1951
69. 1950-1951	1950	1951
70. 1950-1951	1950	1951
71. 1950-1951	1950	1951
72. 1950-1951	1950	1951
73. 1950-1951	1950	1951
74. 1950-1951	1950	1951
75. 1950-1951	1950	1951
76. 1950-1951	1950	1951
77. 1950-1951	1950	1951
78. 1950-1951	1950	1951
79. 1950-1951	1950	1951
80. 1950-1951	1950	1951
81. 1950-1951	1950	1951
82. 1950-1951	1950	1951
83. 1950-1951	1950	1951
84. 1950-1951	1950	1951
85. 1950-1951	1950	1951
86. 1950-1951	1950	1951
87. 1950-1951	1950	1951
88. 1950-1951	1950	1951
89. 1950-1951	1950	1951
90. 1950-1951	1950	1951
91. 1950-1951	1950	1951
92. 1950-1951	1950	1951
93. 1950-1951	1950	1951
94. 1950-1951	1950	1951
95. 1950-1951	1950	1951
96. 1950-1951	1950	1951
97. 1950-1951	1950	1951
98. 1950-1951	1950	1951
99. 1950-1951	1950	1951
100. 1950-1951	1950	1951

STA'N MO. YR. X = GOOD DAY . = BAD DAY

560	JULY	1961	..XXXX.XXXXXXXXXXXXXX.X.....XXXXX
560	AUG	1961	XXXX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..
560	SEPT	1961	XX.....
560	OCT	1961	.....
560	APR	1962	XXXXXX.XX.....
560	MAY	1962	XXXXXXXXX...XXXXXX.XX
560	JUNE	1962	XXXXXXXXXXXX.XXXX.XXXXXXXXXXXXX.XXX
560	JULY	1962	XX.XXXX.XXXXXX.....XXXXXX...XX
560	AUG	1962	X.X..XXXXX..XX.XX..XXXXX.XX..
560	SEPT	1962	..XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXX
560	OCT	1962	.XXXXXXXXXX.....
560	APR	1963	XXXXX
560	MAY	1963	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXX
560	JUNE	1963	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
560	JULY	1963	XXX.XX..XXXXXXXXXXXXXXXXXXXX.XXXX..XXX
560	AUG	1963	XXXXXXXXXXXXXXXXXXXX.XXXX..XXXXXXXXXX
560	SEPT	1963	.XX.XXXXXXX.....
560	OCT	1963	.....
560	APR	1964	.....
560	MAY	1964	X.....XX.....XXXXX
560	JUNE	1964	XXXX.X...XXX...X..XX..XXX....
560	JULY	1964	XXXXXXXXXXXXXXXXX.....XXXXXXXXXXXX...
560	AUG	1964	XXXX..X.....XXXX.XXXXXX
560	SEPT	1964	.....
560	OCT	1964	.....
560	APR	1965	XXXX.
560	MAY	1965	XXXXXXXXXXXXXXXXXXXXX...XXXXXXXXXX...
560	JUNE	1965	.XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.....XX
560	JULY	1965	XXXXXX.....XXXXX..XXXXXXXXXXXX.XXX
560	AUG	1965	XXXXXXXXXXXXX...XXXXXX..X.....
560	SEPT	1965	.....
560	OCT	1965	.....
560	APR	1966	.....
560	MAY	1966	..XXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX
560	JUNE	1966	XX.XXX.XXXXXX..XXXXXXXXXXXXXXXXXXXXX
560	JULY	1966	XXXXXX.....XX..X..XXXXX..XXXX
560	AUG	1966	XXXX.XXXX.....XXXXXXXXXXXXX...X
560	SEPT	1966	XXXX.....XXXXXXXXXXXXXXXXXXXXX
560	OCT	1966	XXXXXXXXXXXXX.XXXXXX...XX.....
2520	APR	1932	X..X...XXXXXX.....XX
2520	MAY	1932	XXXXXXXXXXXXXXXXXXXXX.XXXXX.X.....XXXX
2520	JUNE	1932	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXX.XX
2520	JULY	1932	XXX..XXXXXXXXXXXXXXXXX..XXXXX.XXX...
2520	AUG	1932	XXXXXXXXXX.....XXX.....XXXXXXXXXX.
2520	SEPT	1932	..XXXXX.....
2520	OCT	1932	...XXXXXX.....
2520	APR	1933	X
2520	MAY	1933	XXXXXX..XXXXXXXXXXXXXXXXXXXXX.XXXXX
2520	JUNE	1933	XXXXXXXXXX..XXXXXXXXXXXXX.....XX
2520	JULY	1933	XXXXXXXXXXXX.XXXXX.XX..XXXXX.....
2520	AUG	1933	.X.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.

STA'N MO. YR. X = GOOD DAY . = BAD DAY

2520	SEPT	1933	XXXXX.....
2520	OCT	1933	.....
2520	APR	1934	XXXXXXXX..
2520	MAY	1934	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..
2520	JUNE	1934	.XXXXXXXXXXXXXXXXXX.XXX.....X....
2520	JULY	1934	...XXXXXXXXX...X.X.X...XXXXXXXXX.
2520	AUG	1934	..X...XXXXX.XXXX.X..X..XXXXXXXXXX
2520	SEPT	1934	XXX..XXXXX.....
2520	OCT	1934	.....
2520	APR	1935	.....
2520	MAY	1935	XXXXX...XXXXXXXXXXXXX.....XXXX
2520	JUNE	1935	XXXXXXXX.XXXX...XXXXX..X.....XX..
2520	JULY	1935	XX...XXXXX...XXXXXX.XXX...
2520	AUG	1935	..X...XXXXX.....XXXXX...XXXXX.
2520	SEPT	1935	..X...XXX.XXX.....
2520	OCT	1935	XXXXXXXXX.....
2520	APR	1936	X
2520	MAY	1936	XXXXX.....XXXXX..XXXXXXXXXXXXXXXXX
2520	JUNE	1936	XXXXXXXXXXXXXXXXX...X..XXXXXXXXXXXXX..
2520	JULY	1936	XXX...XXXXXXXXX..XXXXXXXXXX.X..XXX..
2520	AUG	1936	.XXXXXXXXXX.XX.XXXXXXXXXXX.XXXXXXXXX
2520	SEPT	1936	XXXXXXXXXXXXX.....
2520	OCT	1936	.....
2520	APR	1937	X
2520	MAY	1937	XXXXXXXXXXXXX.XXX..XXX.XX..XX.XXXXXX
2520	JUNE	1937	XXXXXX.X.XXXXXXXXXXX.XXXXXX..XXXXX
2520	JULY	1937	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
2520	AUG	1937	XXXXXXXXXXXXXXXXX.....XXXXX.XX
2520	SEPT	1937	XXXXXXXXXXXXXXXXXXXXX.XXXX....
2520	OCT	1937	.....
2520	APR	1938	XXX
2520	MAY	1938	XXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX
2520	JUNE	1938	XXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX..X..
2520	JULY	1938	.XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
2520	AUG	1938	XXXXXX.XXXXXX.X..XXXXXX..XXXXXXXXXX
2520	SEPT	1938	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
2520	OCT	1938	X...XXXXX.X.....XXXXXXXXXXXXX...
2520	APR	1939	XXXXXXXXXXXXX
2520	MAY	1939	XXXXXXXXXX.XXXXXXXXXXXXXX..XXXXXX.XXX
2520	JUNE	1939	XXXXXXXXXXXXX..XXXXXXXXXXXXX..
2520	JULY	1939	X.XX.XX.XXXXXXX.....XXXXXXXXXXXXX.
2520	AUG	1939	.XXX.XXXXXX..XXXXXXXXXXXXX.XXX...
2520	SEPT	1939	.....
2520	OCT	1939	.....
2520	APR	1940	.....
2520	MAY	1940	.XXXXXXXXXXXXXXXXXXXXX.XXXXXX..XXXX
2520	JUNE	1940	XXXXXXXXXXXXX..XXXXX.XXXXXX..XX
2520	JULY	1940	XXXXX.XX...XXXXXX.XXXX.X.XXXXXXX
2520	AUG	1940	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
2520	SEPT	1940	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX.
2520	OCT	1940	...XXXXXXXXXXXXX.....

STAIN MO. YR. X = GOOD DAY . = BAD DAY

2520	APR	1941	XXXXXXXXXXXXXXXXXXXXX
2520	MAY	1941	X.....X.....XXXXXXXXXXXXX
2520	JUNE	1941	XXXXXXXXXXXXX.XX.....X..XXX.XXXXX
2520	JULY	1941	X..XXXX.XXXXXXXXXXXXXX.XXX..XX.X
2520	AUG	1941	XX.....XXXXXX.X...XXX...XXX...
2520	SEPT	1941	.....
2520	OCT	1941	.....
2520	APR	1942	XXX
2520	MAY	1942	XXXXXXXXXXXXX.XXXXXXXXXXXXXX.XXXX
2520	JUNE	1942	XXXXXXXXXX.....XX.....XX.XX.XXXXX
2520	JULY	1942	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
2520	AUG	1942	XXXXXXXXXXXXXXXXXXXXX.XXXXXXX....
2520	SEPT	1942	XX.XXXXXXXXXX.XXXXXXXXXXXXXX
2520	OCT	1942	XX..X.....
2520	APR	1943	XXXXXXXXXXXXX
2520	MAY	1943	XXXX.....XXXXXXXXXX.XXXXXX
2520	JUNE	1943	...XXXXX..XXXXXX..XXX...XXXXX
2520	JULY	1943	XX...X.....X..XXXXXXXXXXXXXXXXXXXXX
2520	AUG	1943	XXX..X.XXX.....XXXXXX.XXXXXXXXX
2520	SEPT	1943	..X..XXXXXXXXXXXXXXXXX...XXXXXXXXXX
2520	OCT	1943	XXXXXXXXXXXXX...XX.....
2520	APR	1944	XXXXXXXXXX
2520	MAY	1944	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX...XXXX..
2520	JUNE	1944	XXXXXX..XXXXXXXXXX...XXXX
2520	JULY	1944	XX.X.X.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2520	AUG	1944	XX.XXXXX.....XX.X.X.XXXXXXXXXXXXX.
2520	SEPT	1944	XXXXXXXXXXXXXXXXX.....
2520	OCT	1944	.....
2520	APR	1945	.....
2520	MAY	1945	..XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..
2520	JUNE	1945	...XXXXX..X...XXXXXXX.X...XXXX
2520	JULY	1945	.X..XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.X
2520	AUG	1945	XX.XXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXX
2520	SEPT	1945	XXXXXXXXXXXXX.XXX..X.....XX
2520	OCT	1945	XXXX...XXXXXXXXXXXXXXXXXXXXX.....
2520	APR	1946	XXXXXX
2520	MAY	1946	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX....
2520	JUNE	1946	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXX
2520	JULY	1946	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXX
2520	AUG	1946	XXXXXXXXXXXXX.XXX..XXXXXXXXXXXXXXXXX
2520	SEPT	1946	XXXXXXXXXXXXXXXXXXXXX.....
2520	OCT	1946	.....
2520	APR	1947	XXXXX
2520	MAY	1947	XXXXXXXXXX.XXXXXXXXXX.XXXXXXXXXXXXX
2520	JUNE	1947	XXXXX...XXXXXXXXXX.XXXX..XXXXXXX
2520	JULY	1947	XXXXX.X.XX.....XXXXX.XXXX.XXX
2520	AUG	1947	XXX.XX..XXXX.....XX...XXXXX
2520	SEPT	1947	XXX.....
2520	OCT	1947	XXXX...XX.....
2520	APR	1948	.....
2520	MAY	1948	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX

STATION	MO.	YR.	X = GOOD DAY	. = BAD DAY
2520	JUNE	1948	XXXXXXXXXXXXXXXXXXXXX	X...XXX
2520	JULY	1948	XXXXX	XXXXXXXXXXXXXXXXXXXXX
2520	AUG	1948	XXXXX	XXXXX.....XXX
2520	SEPT	1948	X.X	XXXXXXXXX.....
2520	OCT	1948		.....
2520	APR	1949		XXXXXXXXXXXXX
2520	MAY	1949	XXXXXXXXXXXXXXXXXXXXX	XXXXX
2520	JUNE	1949	XXXXXXXXXXXXXXXXXXXXX	XX
2520	JULY	1949	XXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXX.XX
2520	AUG	1949	XXXXXXXXX.XX	XXXXXXXXXXXXX.....XXXXX
2520	SEPT	1949	XXXXXXXXXXXXXXXXXXXXX	XXXXX
2520	OCT	1949	XXXXX	.....
2520	APR	1950		X
2520	MAY	1950	XXXXXXXXXXXXXXXXXXXXX	X..XXX.XXXXX
2520	JUNE	1950	XXX	XXXXX.XXXXX
2520	JULY	1950	.XXX.XX	..XX.....XXXXXXXXXX.XXXXX
2520	AUG	1950	.XXXXX..XXXXXXX	XXXXX..XXXXXXXXXX
2520	SEPT	1950	XXXXXXXXXXXXXXXXXXXXX	.....
2520	OCT	1950		.....
2520	APR	1951		XX.X
2520	MAY	1951	XXXXX..X.XXX	XXXXXX.....
2520	JUNE	1951	XXXXXXXXX.XXXXXXXX	XXXXX.XX..XXX.
2520	JULY	1951	XXX..X.XXXXXXXX	XXXXXXXXXXXXX.XX
2520	AUG	1951	XXXXX.....XXXXXXX	XXXXX.X..XXXX
2520	SEPT	1951	XXXXXXXXXX..XXXXXXX	.....
2520	OCT	1951		.....
2520	APR	1952		XXXXXX
2520	MAY	1952	XXXXXXXXXXXXXXXXXXXXX	XXXXXX.XX
2520	JUNE	1952	XXX.X..XX	XXXXX.X..XXX.XXXX
2520	JULY	1952	XXX..XXX..XX	X..XX..XXXXXX
2520	AUG	1952	XXXXXXXXXXXXXXXXXXXXX	XXXXXXX.....
2520	SEPT	1952		XXXXX.X
2520	OCT	1952	XXXXXXXXXXXXXXXXXXXXX	XXXXX
2520	APR	1953		.....
2520	MAY	1953	..XXX.....XXXXXXX	XXXXXXXXXXXXX..
2520	JUNE	1953	XXXXXXXXXX	XXX
2520	JULY	1953	XXX.XXXXXX.XXX	..XXXX.XX..X..X..
2520	AUG	1953	..XXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXX
2520	SEPT	1953	.XXXXXXXXXXXXXXXXXXXXX	XXXXX.X..
2520	OCT	1953		.....
2520	APR	1954		.....
2520	MAY	1954	XXXXXX	XXXXXXX.XX
2520	JUNE	1954	XXX.XXXXXXXXXXXXXX	XXXXXX
2520	JULY	1954	XXXXXXXXXXXXXXXXXXXXX	XXXXXXX.X.....
2520	AUG	1954		XX.X..X.XXXXXXXXXXX
2520	SEPT	1954	..XXXXXXXXXX.XXXXXX	..XXXXXXX.....
2520	OCT	1954		.....
2520	APR	1955		.....
2520	MAY	1955	..XXX.....XXXXXX	XXXXXXXXXXXXX..
2520	JUNE	1955	.XXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXX
2520	JULY	1955	..XX..XX.XXXXXXXX	.....

STA'N MO. YR. X = GOOD DAY . = BAD DAY

2520	AUG	1955	..XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2520	SEPT	1955	XXXXXXXXXXXXXXXXXX.....
2520	OCT	1955	.....
2520	APR	1957	XX
2520	MAY	1957	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XX
2520	JUNE	1957	XXXXXXXXXX..XXXXXXXXXX.....X.
2520	JULY	1957	XXXXXXXXXX.XX..XXXXXX..XX..
2520	AUG	1957	...X.XXX.....XXX.....XXX
2520	SEPT	1957	XXX.....XXXXXXXXXXXXXXXXXX
2520	OCT	1957	X.....
2520	APR	1958	.....
2520	MAY	1958	..XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2520	JUNE	1958	XXXXXXXXXXXXXXXXXX.XXXXXXXXXXX.
2520	JULY	1958	XXXXXXXXXX.X..X.XXXXXXXXXXXXXXXXX
2520	AUG	1958	XX.XXXXXXXXXXXXXXXXXXXXXXXXXXX.
2520	SEPT	1958	..XXXXXXXXXX....XX...XXX.....
2520	OCT	1958	.....
2520	APR	1959	XXXXXXXXXX....XXXX..
2520	MAY	1959	X.....XXXXXXXXXX..XXXXXX
2520	JUNE	1959	XXXXXXXXXXXXXXXXXXXXXXXXXX....XXXX
2520	JULY	1959	X.....XXX.XXXXXXXXXXXXXXXXXXX
2520	AUG	1959	XX.....XX..X.....X.....
2520	SEPT	1959	..XX.XXXXXXXXXXXXXXXXXX..XXXXXXXXXX
2520	OCT	1959	XXXXX.....
2520	APR	1960	XX
2520	MAY	1960	XXXXXXXXXXXXXXXXXXXXXXXXXX....XXXXXXXX
2520	JUNE	1960	XXXXX....XXXXXXXXXX....XXXXXXXXXX
2520	JULY	1960	XXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXX
2520	AUG	1960	XXXXXXXXXXXXXXXXXX.XXXXXXX.XXXXXXXXXXX
2520	SEPT	1960	XXXXX....XXXXXXXXXXXXXXXXXXXXXXXXXX
2520	OCT	1960	XX.XXX..XXX.....
2520	APR	1961	XX
2520	MAY	1961	X..XXXXXXXXXX.XXX.XXXXXXX.XXX..XX
2520	JUNE	1961	XXXXXX....XX..XXXXXXXXXX.X.....
2520	JULY	1961	...XXX..XXXXXXXXXXXXX..X....XXXXX
2520	AUG	1961	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.
2520	SEPT	1961	XXXXXXXXXX.....X
2520	OCT	1961	XXXXXXXXX.....
2520	APR	1962	.....
2520	MAY	1962	XXXXXXXXXX....XXXXX..X
2520	JUNE	1962	XXXXXXXXXXXXX....XXXXXXXXXXXXX..XX
2520	JULY	1962	XXXXXXXXXX.XXXX.....XXXXX.XXX
2520	AUG	1962	XXXXXXXXXXXXX....XXX..XXXXX..XXX
2520	SEPT	1962	XXXXX.....XXXXXX
2520	OCT	1962	X.XXXXXXXXXX.....
2520	APR	1963	XXXXX
2520	MAY	1963	XXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXX
2520	JUNE	1963	XXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXXX
2520	JULY	1963	XXXXXXXXXXXXXXXXXXXXXXXXXX..XX.X...
2520	AUG	1963	XXXXXXXXXXXXXXXXXX.XXXXXX....XXXXX
2520	SEPT	1963	XXX.XXXXXXXXXX.....

B.1.2 Sandy Soils

In making estimates of good and bad days for sandy soils, a day was classified as bad if the moisture content in either of the top two soil moisture zones was greater than 95% of the capacity of that respective zone, provided that there was no snow on the ground. Again it was assumed that if there was snow on the ground in the Spring, the temperature did not rise above 45°F. If there was snow on the ground in the Fall, it was assumed that the air temperature did not rise above 40°F. Hence, it was considered that there was snow on the ground in the Spring when temperatures did not exceed 45°F. during the day, and in the Fall when temperatures did not exceed 40°F.

The weather stations are:

Edmonton	2195 - 2208
Vermilion	6800
Calgary	1080 - 1100
Lethbridge	3880 - 3390
Medicine Hat	4480
Beaverlodge	560
Fairview	2520

STA'N MO. YR. X = GOOD DAY . = BAD DAY

2195	APR	1921	XXXXXXXXXXXXXXXXXXXXX
2195	MAY	1921	XXX.XXXXXX..XXXXXXXXXXXXX..XXXX
2195	JUNE	1921	XXXX.X.XXX.XXXXX..XXXXXX.XXXX.
2195	JULY	1921	XXXXXXXXXX.XXXXXX.XXX..X.
2195	AUG	1921	X.XX.XX..XXXXXXXXX.XXXXXXXXXXXXXX
2195	SEPT	1921	XXXXXX.....XXXXXXXXXXXXXXXXXX
2195	OCT	1921	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2195	APR	1922	.XX.XXX.XX.....XXXXXXXXXXXXX
2195	MAY	1922	XXXXXXXXX..XXXXXXXXXXXXXXXXXX.XXXXX
2195	JUNE	1922	XXXXX.XXXXXXXXXX.XXXXXXXXXXXXX..X
2195	JULY	1922	XX..XX.X.XXXXXXXXXXXXXX.XXXXXXXXX
2195	AUG	1922	XXXXX..XXXXX..X..XX....XXXX.XXXX
2195	SEPT	1922	.XXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXXX
2195	OCT	1922	XXXXXXXXXXXXX..XXXXXXXXXX.
2195	APR	1923	X.XXXXXXXXXXXXXXXXXXXXX.
2195	MAY	1923	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXX
2195	JUNE	1923	.X.XXX.XXXXX.XXXXXXXXXX..X..XXXX
2195	JULY	1923	XX..X...XXXXXXXXXX..X.XX.XXXXXXXXX
2195	AUG	1923	XXXX...XXXXXXXXXXXXX.XXX..XXX..XX
2195	SEPT	1923	XXXXXXXXXXXXXXXXXXXXX...XXXXXXXXX
2195	OCT	1923	XXXXXXXXXXXXXXXXXX..XXXXX...X...XX
2195	APR	1924	XX.....X...XXXXXX
2195	MAY	1924	XXX.XXXXXXXXXXXXXXXXXXXXXX.XXXXXX
2195	JUNE	1924	XXXXXXXXXXXXX..XXX.XXXXXXXXXX.XX
2195	JULY	1924	XXXXX.XXXXXXXXXX..X.XXX.XXX.X..X.
2195	AUG	1924	X.XXXX.XXXXXX..XX.X.XXXXXXXXXX..X
2195	SEPT	1924	XXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXX.XXXXX
2195	OCT	1924	XX...XXXXXXXXXXXXXXXXXXXXXXXXXX...
2195	APR	1925	XXXXXXXXXX.XX...X...XXXXX
2195	MAY	1925	X.XXXXXXXXXXXXXXXXXXXXXX..XXXXXX.X
2195	JUNE	1925	X...XXXXXXXXXXXXXXXXXXXXX.XXXX.XX
2195	JULY	1925	.XXXXXXXXXXXXXXXXXXXXXXXXX.X.X.XXXXX
2195	AUG	1925	XXXXX..XXX.XXX....XXXXX..XXXXXXXXX
2195	SEPT	1925	XXX..XXX...XXXXXXXXXXXXXXXXXXXXX
2195	OCT	1925	XXX.....X.....
2195	APR	1926	XXXXXXXXXXXXXXXXXXXXXXXXX
2195	MAY	1926	XXX.XX.XXXXXXXXXXXXXXXXXXXXXX.XXXXXX..
2195	JUNE	1926	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2195	JULY	1926	XXXXXXXXXX.XXXXXX.XXXXXXXXXX.XX.X
2195	AUG	1926	.XXX.X.XX..XX.XXXXXX..XXXXX..XX..
2195	SEPT	1926	X.XXXX.....XX...
2195	OCT	1926	.X.XXX.....XXXXXX
2195	APR	1927	...X..X.....XXXXX...XXXXX.XXX..
2195	MAY	1927	...XXXXXXXXXXXXX.XXXXXXX.X..XXX
2195	JUNE	1927	XXXXXXXXXXXXX.XX...XX..X.XXX.
2195	JULY	1927	XX.X..X..XX.XXXXXX..XXXXXXXXXXXXX
2195	AUG	1927	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX...X
2195	SEPT	1927	XXXXX..XXXXX...XXXXXXXXXX...X...
2195	OCT	1927	XXXXXXXXXXXXXXXXXXXXXXXXX
2195	APR	1928	XXXXXXXXXXXXX
2195	MAY	1928	..XXXXXXXXXXXXXXXXXXXXX.XXXX.XX.X

[illegible]

STATION	MO.	YR.	X = GOOD DAY	. = BAD DAY
2195	JUNE	1928	XXXXXXXXXXXXXXXXXX..XXXXXXXXX.XXXXXXX.	
2195	JULY	1928	XXX..XX.XXXXXX.XXXXXXXXXXXXXXXXXXXXXX	
2195	AUG	1928	XXX....XXX.XXX.XXXXXXXXXXXXXXXXXXXXXX	
2195	SEPT	1928	XXXXX..XXXXXXXXXXXXX.XXXXXXXXXXXXXXX	
2195	OCT	1928	X..XXXXXXXXXXXXXXXXX..XXXXXXXXXXXXXX	
2195	APR	1929	XXXXX..XXXXXX..XXXXXXX	
2195	MAY	1929	XXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXX	
2195	JUNE	1929	XXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX..XXXX	
2195	JULY	1929	XXXXX..XX..XXXXXXXXXXXXX.XXXXXXXXXXXXX	
2195	AUG	1929	XX..XXXXXX.XXXXXXXXXXX..XX..XXXXXX.	
2195	SEPT	1929	XXXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXX	
2195	OCT	1929	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..	
2195	APR	1930	XXXXXXXXXXXXXXXXXX..XXXXX.XXXXX.XXXXX	
2195	MAY	1930	XXXXXXXXXXXXXXXXXXXXX.XX..XXXXXXXXXXXXX	
2195	JUNE	1930	X.XXXXXXXXXXX..XXXXXXXXXXXXXX..XXX	
2195	JULY	1930	.XXXXXXXXXXXXXXXXXX.X.XXXX.XXXXXXX	
2195	AUG	1930	XXXXXXXXXXXXX.XXXXXXXXXXX..XXXXX..XXXXX	
2195	SEPT	1930	XXXXX..XXX.XXXXXXX.XX.....	
2195	OCT	1930	XXXXXXXXX....XX.....XXXXXXXXXX	
2195	APR	1931	..XXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXX	
2195	MAY	1931	XX..X...XXXXXXXXXX..X.XXXXXXXXXXXXXX	
2195	JUNE	1931	XXXXXXXXXX.XX.XXXX...X.X..XXXXXX.	
2195	JULY	1931	.XX..XXXXXX..XXXXXXXXXXXXXXXXXX..XX.X	
2195	AUG	1931	XX.....XXXXX.XXXXXXXXXXX.XXXX.XX..X	
2195	SEPT	1931	XXXXXX.XXXXXXXXXXXXXXX.XXXXXXXXXXX	
2195	OCT	1931	XXXXX...X..XXXXXXXXXXXXXXXXXXXXXXXXXX	
2195	APR	1932	.XXXXX.XXXXXXXXXXXXXX.XX.....X.XXX	
2195	MAY	1932	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XX.XXXX.	
2195	JUNE	1932	XXXXXXXXXXXXXXXXXXXXX.XXXXXX.X	
2195	JULY	1932	XX..X..X.X.XXX.X..X.XXXXXX.XXXXXX	
2195	AUG	1932	XXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXX.XXXXXX	
2195	SEPT	1932	XXXXXXXXXXXXXXXXXXXXX.....XXXXXXXXXXXX	
2195	OCT	1932	XXXXXXXXXXXXX..XXX.....XXXXXXXXXX.....	
2195	APR	1933	.X.XX.....XXX...XXXXXXXXXX.XXXX	
2195	MAY	1933	XXX.XXX.XXXXXXX..XXXXXXXXXXXXXXXXXX	
2195	JUNE	1933	XXXXX...X.XXXXXXXXXXXXXXXXXX.....XXX..	
2195	JULY	1933	XX..XXX..XXXXXXXXXXXXXXXXXXXXX.X..X	
2195	AUG	1933	XX.XXXXXXXXXXXXXXXXXXXXXX..XXXXXXXXX.	
2195	SEPT	1933	.XXX..XXXXXXXXX.....XXXXXXXXX.XXXXX	
2195	OCT	1933	XXXXXXXXXXXXXXXXXX..XXXXX.....	
2195	APR	1934	..XXXXX..XX...XXXXXXXXXXXXXXXXXX...	
2195	MAY	1934	..XXXXXXXXXXXXXXXXXXXXX.XXX.XXXXXXXXXX..	
2195	JUNE	1934	XXXXXXXXXX.XX.X.X.XXXXXX..X.XXX..	
2195	JULY	1934	XXX.XXXXXX.X..XXXXXX.XX.XXXXXXX.	
2195	AUG	1934	XXXXX..XXX..XXXXXXXXXX.X.XXXXXXX..	
2195	SEPT	1934	.XXXXXXXXXX.....	
2195	OCT	1934	XXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXX	
2195	APR	1935	XX...XXXXX.XXXXX.XX.	
2195	MAY	1935	..XXXXXXXXXXXXXXXXXXXXX..XXX.....XXXXXX	
2195	JUNE	1935	.XXXXXX.XXXXX.X..XX.XXXXX..XXXXX.	
2195	JULY	1935	.X.XXX.XXXXXXXXXX.XXXXXXXXXXXXXX.XX.	

STA'N MO. YR. X = GOOD DAY . = BAD DAY

2195	AUG	1935	..XX.XXXXXXXXXX..X..XXXXXX.XX.XXX
2195	SEPT	1935	XXXXXXXXXX...XXXXXXXXXXXXXXXXXXXX
2195	OCT	1935	XXXXXX....XX.....XXX.....
2195	APR	1936	XX.XXXXXXXXXX....XX.XXX
2195	MAY	1936	XXXX....XX.XXX.XXX.XXXXXXXXXXXXX
2195	JUNE	1936	XXXXXXXXXXXXXXXXXX..XXXXXXXXXX.XXX.X
2195	JULY	1936	XX.XX.XXXXXXXXXXXXXXXXXX..XX.XXXXXX.
2195	AUG	1936	XXXXX.XXXXXX..X.XXX.X.X.XXXXXXXXX
2195	SEPT	1936	XXXXX.XXXX....XXXXXXXXX.XXXXXXX.X
2195	OCT	1936	XXXXXXXXXXXXXXXXXXXXX.....
2195	APR	1937	...XXXXXX.XX.XXXXXX..XXXXXXXXXXXX
2195	MAY	1937	XXXX....XX.XXXXXXXXXX..X.XXXXXXXXX
2195	JUNE	1937	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2195	JULY	1937	.XXX.XXXXXXXXXX..XXXXXXXXX.XXXX..X
2195	AUG	1937	.XXXXXXXXXXXXXXXXX..XXXXXXXXX.XX.XXXX
2200	SEPT	1937	XXXXXXXXXXXXXXXXXXXXX...X.....
2200	OCT	1937	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2200	APR	1938	.X.....XXXXXXXXXXXXXXXXXX...XXXXXX
2200	MAY	1938	.XXXXX..XXXXXXXXXXXXXXXXXXXXXXXXXXXX
2200	JUNE	1938	XXX.XXX.XXXXXXXXXX.XXXXXXXXXX.X.X
2200	JULY	1938	XX..XX.XX.XXXXXX.XXXXXXXXXXXXXXXXXX
2200	AUG	1938	.XXXXX..XX..X.....XX.X.XXXXXXXXX
2200	SEPT	1938	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2200	OCT	1938	XX...XXXXX.....XXXXXXXXXXXXXXXXXXXX.
2200	APR	1939	X...XX...XXXXXXXXXXXXXXXXXXXX
2200	MAY	1939	XXX...XXXXXXXXXXXXX.....XXXXXXXXXX.X
2200	JUNE	1939	XXX.XXXXXXXXXX.XXXXXXXXXXXXXXXXXX..XXXX
2200	JULY	1939	XXXXXXXXXXXXXXXXXXXXX...XXXXXXXXXXXX
2200	AUG	1939	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2200	SEPT	1939	XXXXXXXXXXXX...XXXXXXXXXXXXXXXXXXXX..X
2200	OCT	1939	XXXX..XXXX.....
2200	APR	1940	XX...XX.....X..X
2200	MAY	1940	XXXX..XXXXXXXXXXXXXXXXXXXXXXXXXXXX....
2200	JUNE	1940	XXXXXXXXXXXXX..XXXXX.XXXXXX...XXX
2200	JULY	1940	XX.XXX...XXX.XX..XXXXX.XXXXXXXXX
2200	AUG	1940	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXX
2200	SEPT	1940	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2200	OCT	1940	XXXXXXXXXXXXXXXXXXXXX.....
2200	APR	1941	XXXXXXXXXXXXX..XXXXXXXXXXXXXXXX
2200	MAY	1941	XXX.XX..XXXXXXXXXXXXXXXXXXXXXXXXXXXX
2200	JUNE	1941	XXXXXXXXXXXXXXXXXXXXX.XX...XX...XXXX
2200	JULY	1941	.XXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXXXXX.XX
2200	AUG	1941	X..X.XXXXXXXXXX..XXXXX.XXXXXXX..
2200	SEPT	1941	XXX.X.XXXXXXXXXXXXXX...XX.....XXX
2200	OCT	1941	X.....XXXXXXXXXXXXXXXXXXXXX...X.
2200	APR	1942	.X.....XXXXX...XXXXXXXXX..XXXX
2200	MAY	1942	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX...XXX
2200	JUNF	1942	XXXXXXXXXX.XXXX....XXXXX..XXXXXX
2200	JULY	1942	XXXXXX..XX.XX.XX.XXXXXXXXXXXXX
2200	AUG	1942	XXXXXXXXXXXXX..XXXXXXXXXXXXXXXXX...XXXX
2200	SEPT	1942	..XXXXXXXXXXXXX.....XXXXX..XXXXX

STATION	MO.	YR.	X = GOOD DAY	. = BAD DAY
2200	OCT	1942	XXXXXXXXXXXXXXXXXXXXXXXXXXXX	.....
2200	APR	1943	XXXXX..XXXXXXXXXXXXXXXX	XXXXXXXX
2200	MAY	1943	.XXXXXXXX.XXXXX.XXXXXXXXXXXXX	XXX.
2200	JUNE	1943	..XXXXXXXXX.XXXXXX..X.X..X	XXXXX
2200	JULY	1943	XXXXXXXXX...XXX..XXXXX.XXX	..XXXXXX
2200	AUG	1943	XXXXXXXXX.XXX...XX..XXX..	XXXXXX.XX
2200	SEPT	1943	XXX.XXXXXXXXXXXXXX.XXXXXXX	XXXXXXXXXX
2200	OCT	1943	XXXXXXXXXXXXX.....X.....	
2200	APR	1944	.XXX.XXXXXXXXXXXXXXXXXXXXXX	
2200	MAY	1944	.XXXXXXXXX...XXX.X.XXXX.	XXXXXXXXXX
2200	JUNE	1944	...XXXXXXXXX.....XXXXXXXXXX	
2200	JULY	1944	..XXX...XXXXX.XXXXXXXXXXX	XXX.....
2200	AUG	1944	XXXXXXXXXXXXX.XXXXXXXXXXXXX	X..XXX
2200	SEPT	1944	XXXXXXXXXXXXXXXXX.....XX	..X...
2200	OCT	1944	.XXX.XXXXXXXXXXXXXXXXXXXXXX	
2200	APR	1945	...X.....X..XXX..XXX.....	XX
2200	MAY	1945	XXXXXXXXXXXXXXXXXXXXXXXXXXXX	
2200	JUNE	1945	XXXXXXXXXXXXX..XXXXXXXXXX	XXX..XX.
2200	JULY	1945	.XXX.XXXXXXXXXX..XXXXXXXXXX	...X
2200	AUG	1945	XX..XXXXXXXXXXXXX..XXXXXX	X....X
2200	SEPT	1945	XXXXXX.XXXXXXX.X.....XX	
2200	OCT	1945	XXXXX...XXXXXXXXXXXXXXX	.....
2200	APR	1946	.X..X..XXXXXXXXXXXXXXXXXXXX	XXXX
2200	MAY	1946	XXXXXXXXXXXXXXXXXXXXX.XXXXX	..XX
2200	JUNE	1946	XX.XXXX.XXXXXX..XXXXXX	XXXX
2200	JULY	1946	XXX...XXXXXX..X.XXXXXXXXXX	XX
2200	AUG	1946	XXXXXX.XXXX.XX..XXXXXX	..XXXXXX
2200	SEPT	1946	XXX...XXXXXXXXX..XXXXX	..XXX..XXX
2200	OCT	1946	XXXXXXXXXXXXXX..XXXXXXXXXX	..XX
2200	APR	1947	XXXXX..XXXXX..XXXXXX	
2200	MAY	1947	XXXXXXXXXX..XXXXXXXXXXXXXX	
2200	JUNE	1947	XXXX.XX..X.X..XXXXXXXXXXXXX	X
2200	JULY	1947	X.XXXXXXX..XXXXXXXXXXXXXX	XX..XX
2200	AUG	1947	XX..XXX.XX.XXXXXX.XXX	..XXXX.XXX
2200	SEPT	1947	XXX.XX...XX.....X..XXXXX	
2200	OCT	1947	XX.XXXX..XXXXXXXXXXXXXXX	..
2200	APR	1948	XXXXX..XXXXX..XXXXXX	
2200	MAY	1948	..XXX..XXXXXX.XXX.XXXXXXX	
2200	JUNE	1948	.XXXXX.XXXXXXXXXXXXXXX	XXXXXX
2200	JULY	1948	XXXXXXXXX.XXX...XXXXXX	XXX.XXXX
2200	AUG	1948	XXXXX..XXX...XXXXX.XXXXXXX	
2200	SEPT	1948	XXXXXXXXXXXXX..XXXXXXXXXX	XXXXXX
2200	OCT	1948	XXXXXXXXXXXXXXX..XXXXXXXXXX	
2200	APR	1949	.XXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXX
2200	MAY	1949	XXXXXXXXXXXXXXXXXXXXX..XX	XXX
2200	JUNE	1949	XXXXXXXXXXXXXXXXXXXXX	XXXXXX
2200	JULY	1949	XXXXX.XXXXXXXXXX...X.XX	..XXX.X
2200	AUG	1949	X.XXXX..XXXXXXXXXXXXX	XXXXXXXXXX
2200	SEPT	1949	XXXXXXXXXXXXXXXXXXXXX	
2200	OCT	1949	XXXXXX..XXXXXX..XX...XX	..XX
2200	APR	1950	XXXXX..XXXXXXXXXX	

STATION MO. YR. X = GOOD DAY . = BAD DAY

2200	MAY	1950	XXXX.XXXXXXXXXXXXXX.XXXXXXXXXXXXXX
2200	JUNE	1950	XXX..XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.X
2200	JULY	1950	XXXXXXXXXX..XX.XXXXXXXXXXXXXXXXXX.XXX
2200	AUG	1950	X..XX.XX..X..X.XXXXXXXXXXXXXXXXXX.XX
2200	SEPT	1950	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..
2200	OCT	1950	XXXXXXXXX.....XXXXX..
2200	APR	1951	..XXXXXX..XX..X.....XXXXXXX.
2200	MAY	1951	...XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXX
2200	JUNE	1951	XXXXXXXXX.XXXXXXXXXXXXXXXXXX..X.XXXXXX
2200	JULY	1951	XXXX.XX.XXX..XX....XXX.XXXXXX..X
2200	AUG	1951	XXX....XX.XXXXXXXXXXXXXXXXXX..X....
2200	SEPT	1951	.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.....X
2200	OCT	1951	XXXXXXXXXXXXXXXXX.....
2200	APR	1952	...XXX..XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2200	MAY	1952	XXX...XXXXXXXXXXXXXXXXXX..XX.XXXXXX
2200	JUNE	1952	XXXXXXXXXX....XXXXXX....X.XXX..
2200	JULY	1952	XXXX.XXXXXXXXXXXXXX.XX..XXXXXXXXXXXX
2200	AUG	1952	X..XXXXXXXXXXXXXXXXXX.XXXXXXXXXXX.XX
2200	SEPT	1952	XX..XXXXXX..XXXXXXXXXXXXXXXXXXXXX
2200	OCT	1952	XXXXXXXXXXXXXXXXXX.XXXXXXXXXX.....XXX
2200	APR	1953	.XXXXXX.....XXXX.XXXXXX.
2200	MAY	1953	..XXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2200	JUNE	1953	..XXXXX.XXXXXX.XX.....XXX..XXX.X
2200	JULY	1953	X....XXXXXXXXXX.XX.X.XX..XXXXX..
2200	AUG	1953	.X.XXXXX..XX.XXXXXXXXXXXXXX..XXXXX.X
2200	SEPT	1953	XXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXX
2200	OCT	1953	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..
2200	APR	1954	XXX.XXX..X.....
2200	MAY	1954	XXXXXXXXX.X....XXXXXXXXX..XX..X.XXX
2200	JUNE	1954	XXX....XXXXXXXXXXXXX.XXXXXXXXXXXXXX
2200	JULY	1954	XXXXXX.XX.XXX..X.XXXXXXXXXX..XX.X
2200	AUG	1954	X...XXXXX.XXXXXXXXXX..XXXXX...XXX.
2200	SEPT	1954	XX...XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2200	OCT	1954	X...XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.....
2200	APR	1955	XXXXXXXXX..XXX.....XX....X
2200	MAY	1955	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXX
2200	JUNE	1955	XXXXXXXXXXXXXXXXXX.XXX.XXXXXXXXXXXXXX
2200	JULY	1955	X.XX..XXXXXXXXXXXXXXXXXXXXX..XXX.XX
2200	AUG	1955	XXX.XXXXXXXXXXXXXX.XXXXXXXXXXXXXX
2200	SEPT	1955	XXXXX.XXXXXXXXXX..X.....XXXXX..
2200	OCT	1955	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..
2200	APR	1956	XXXXX..XX..X.....
2200	MAY	1956	.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2200	JUNE	1956	.XX..XXXXXXXXXXXXX..XXXXXX..XXX...
2200	JULY	1956	XXXXX.XX.XXXXXXXXXXXXXX..X.XXXXX
2200	AUG	1956	XX..XXXXXXXXXXXXX..XXXXXXXXXXXXX.XXXX
2200	SEPT	1956	XXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXX
2200	OCT	1956	XXX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.....
2200	APR	1957	..XX.....XXXXXXXXXXXXX..XXXXX
2200	MAY	1957	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2200	JUNE	1957	XXXXXX..XXXXXXXXXXXXX..XXXXXXXXXXXXX

STA#N MO. YR. X = GOOD DAY . = BAD DAY

2200	JULY	1957	XXXXX.XXXXXXXXXXXXXX.XXXXX.XXX.X
2200	AUG	1957	.XXXXXXXXX.....XXXXXXXXXXXXX.....XXXX
2200	SEPT	1957	XXXXXXXX.XXXX.XXXXXXXXXXXXXXXXXXXXXX
2200	OCT	1957	X.....XXXXXXXXXXXXXXXXXXXXXXXXXX
2200	APR	1958	XXXXX.XXXXXXXXXXXXXX..XX.XXX
2200	MAY	1958	.XXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXX.X
2200	JUNE	1958	.XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..X.
2200	JULY	1958	XXXXXXXXXX.XXXXXXXXXXX.XXX.XXXXXX
2200	AUG	1958	XX.XXXX..XXXXXXXXXXXXXXXXXXXXX..XXX
2200	SEPT	1958	XXXXXXXXXXXXX.....X.XXX.XXX.X.....
2200	OCT	1958	.XXXXXX.....XXXXXXXXXXXXXXXXXXXXX
2200	APR	1959	.XXXXX.XXXXXXXXXXXXXX.....XXXXXX
2200	MAY	1959	XXX..XXXXXXXXXXXXXXXXXX.XXXXXXX
2200	JUNE	1959	XXXXXXXXXX.XXXXXX..X.X.X.XXXXXX
2200	JULY	1959	...XXXXX.XXXXXXXXXXXXXX.XXXXXX..XXX
2200	AUG	1959	..X.XX.X..XXX..X..XX.XXXX..XXX
2200	SEPT	1959	XXXXXXXXX.XXXXXXXXXXXXXX.....X.....
2200	OCT	1959	.XX.....XXXXX.....
2200	APR	1960	.XXXXXXXXXXXXXXXXXX.XXXXXXXXXX..XXXXX
2200	MAY	1960	XX..XXXXXXXXX..XX..XXXXXXXXXX.XXXX
2200	JUNE	1960	XX.XXXXXXXXXXXXXXXXXXXXXX.X..X.XXX
2200	JULY	1960	...XXXXXXXXX.XXXXXXXXXXXXXX.X.XXXXXX
2200	AUG	1960	XXX..XXXXXXXXXX.XXXXXX..XXXXXXXXXX
2200	SEPT	1960	XXX.X..XXXXXXXXXXXXXXXX..XXXXXXXXXX
2200	OCT	1960	XXXXXXXXX.....XXXXX.....
2200	APR	1961	XX....XX.....XXXXXXXXXX....XXX
2200	MAY	1961	XXXXX.....XXXXXXXXXXXXXXXXXXXXX.XXXX
2200	JUNE	1961	XXXXXXXXXXXXX.XXXXXXXXXXXXXX..XX..
2200	JULY	1961	..XXXXXXXXXXXXXXXXXX..XXXXX.....X.X
2200	AUG	1961	XXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXXXXX
2200	SEPT	1961	XX.XXXXXXXXXXXXXXXXXXX.XXX.....
2200	OCT	1961	.XXX..XX..XXXXXXXXX.....
2205	APR	1963	.XXX.....XXXXX..X..XXXXXXXXXX
2205	MAY	1963	X...XXXXXXXXXXXXXXXXXXXXX.XXXXXX
2205	JUNE	1963	XXXXXXXXXXXXXXXXXXXXX..XX..XXXX
2205	JULY	1963	XXXXXXXXX.X..XXX..XXX.XXXX.XXXXXX
2205	AUG	1963	XXXXXXXXXXXXXXXXXXXXX..XXXXXXXXX....XXXX
2205	SEPT	1963	XXXXXXXXXXXXX.XX.....XXXXXXXXXXXXXXXX
2205	OCT	1963	XXXXX.XXXXXXXXXXXXXX.XXXXXXXXXXXXXX
2205	APR	1964	XXXXXXXXX..XX.X.XXX.XXXX
2205	MAY	1964	XX.....XXXXXXXXXXXXXXXXXX.XXXXXXXXXX
2205	JUNE	1964	XXXXXXXXXXXXX.XXXX.XXXXX.XXXXX.
2205	JULY	1964	XX.XXXXXX.XXXXXX.XX.XXX.XXX.X.X.
2205	AUG	1964	XXXXX.XXX.XXX.XXXXXXXXXXX.X.XX.....
2205	SEPT	1964	X.XX.XX..XXXXXX..XXXXX.....
2205	OCT	1964	...XXXXXXXXXXXXXXXXXXXXX..XXX
2205	APR	1965	X.....XXXXX.XX
2205	MAY	1965	XXXXXXXXXXXXXXXXXXXXX..XXXXX..XXXX..
2205	JUNE	1965	XX.XXXXXXX.XXXX..XXXXXX....XX
2205	JULY	1965	XXXXXX.X.X..XX.X.XXXX.XXXXXXXXXX
2205	AUG	1965	XXXXXXXXXX..XX.X.XXXXXXXXXXXXXX.....X

STATION MO. YR. X = GOOD DAY . = BAD DAY

2205	SEPT	1965	XXX..XXXX...X.....XXX
2205	OCT	1965	XXXXXXXXXXXXXXXXXXXXXXXXXXXX
2208	APR	1962	.XXXX.....XXXXXXXXXXXXXXXXX..X
2208	MAY	1962	XXX..XXXXXXXXXX.XXXXXXXXXXXXXX.X.
2208	JUNE	1962	.X.XXX.X...XXXX..XXXXXXXXXXXXXX
2208	JULY	1962	..XXXXXXXXXXXX.XX..XX..XXX.XX.XXX
2208	AUG	1962	XXX...X.X.XXXXXXXXXXX.X.X.XX....X
2208	SEPT	1962	.XXXX..XXX...X.XXXXXXXXXXXXXXXXXX
2208	OCT	1962	XXXXXXXXXXXXX.....XXXXX.....XXXXXX
6800	APR	1947	XXX.X..XXX.X...XXXXXXXXXX
6800	MAY	1947	XXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXX
6800	JUNE	1947	XXXX.XXXXXXXXX..XXXXXXXXXXXXXXXXXX
6800	JULY	1947	X.X.XX.X...XXXXXXXXXXXXXXXXXXXXXX.XX
6800	AUG	1947	XXX.XXXXXXXXXXXXXX...X.....XXXXX
6800	SEPT	1947	XXXXXX..XXX.....XXXXXX
6800	OCT	1947	XXXXXXXXX...XXXXXXXXXXXXXXXXXXXXXX
6800	APR	1948	X.....X...XXX
6800	MAY	1948	..XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
6800	JUNE	1948	XXXXXX.XXXXXXX.XXXXXX..X..XXXX
6800	JULY	1948	.XXXXXXXXXXXXX..XXXXXXXXXXXXX.XXXXXXX
6800	AUG	1948	XXXXXXXXXXXXX...XXXXXXXXXXXXX.XXXXXXX
6800	SEPT	1948	XXXXXXXXXXXXX..XXXXXXXXXXXXX..XXXXXX
6800	OCT	1948	XXXXX.XXXXXXXXXX..XXXXXXXXXXXXXXXXXX
6800	APR	1949	.XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXX
6800	MAY	1949	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXX.X
6800	JUNE	1949	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXX.
6800	JULY	1949	XXXXX.XXXXXXXXXXX.X...XX..X.XXXX
6800	AUG	1949	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XX.XXXXXX
6800	SEPT	1949	XXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXX
6800	OCT	1949	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXX
6800	APR	1950	XXXXX.XXXXXXXXXXXXXXXXXX
6800	MAY	1950	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXX
6800	JUNE	1950	XXX...XXXXXXXXXXXXXXXXXX..XXXXXX
6800	JULY	1950	XXXXXXXXXXXXXXXXXX.XX.X.XXXXXXXXXX..X
6800	AUG	1950	X.XXXXXXX..X.XXXXXXXXXXXXXXXXXXXXXX
6800	SEPT	1950	XXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX.....
6800	OCT	1950	XXX.....XXX..
6800	APR	1951	..XXX.X...XX.....X.XXXX..
6800	MAY	1951	...XXXXXXXXX..XX.XX.XXXXXX.....
6800	JUNE	1951	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXX.X
6800	JULY	1951	XXXXX..XXXXXXXXX..X.X.XXXXXXX.X.X
6800	AUG	1951	XXXXXXXXX.X.XXXXXXXXXXXXXXXXXXXXXX.X..
6800	SEPT	1951	.XXXXXXXXXXXXX.XXXXXXXXXX.....X
6800	OCT	1951	XXXXXXXXXXXXXXXXX.....
6800	APR	1952	X...XXXXXXXXXXXXX.XXXXXXXXXXX
6800	MAY	1952	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXX..XXXXX
6800	JUNE	1952	XXXXXXXXXXXXX..XX.XXXXXX..XXXXXX..
6800	JULY	1952	XXX..XXXXX.XX..XXXXX..XXX..XXXXX
6800	AUG	1952	..X.XXXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXX
6800	SEPT	1952	XX..XXXXX.XX..XXXXXXXXXXXXXXXXXXXXX
6800	OCT	1952	XXXXXXXXXXXXX.....XXXXXXXXXX..XXXXX

STA'N MO. YR. X = GOOD DAY . = BAD DAY

6800	APR	1953	..XX.X.....XXXXXXXXXXXX..
6800	MAY	1953	..XXXXXXXXXXXXXXXXXXXXXXXXX
6800	JUNE	1953	XXXXXXXXXX.XX.XXX..XXX.....XX.
6800	JULY	1953	XXXXXXXXXXXXXX.XX...XX.XXX..XX..
6800	AUG	1953	.XXXXXX..X..XXXXXXXXXXXXX...XXXXX
6800	SEPT	1953	.XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXX
6800	OCT	1953	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX...
6800	APR	1954	XXXXXXXXX...X.....
6800	MAY	1954	XXXXXXXXXXXXX..XXXXXXXXX..XXX.XX.XX
6800	JUNE	1954	X.X...X.XX.X.XXXX.XXXXXXXXXX.XXXX
6800	JULY	1954	XXXXXXXXXX.XXXX..XXXXXXXXXXXXX..XXX
6800	AUG	1954	..X..XXX..XXXXXXXXXX..XXXXX...XXX.
6800	SEPT	1954	XXXXXXXXXXXXX..XXXXXXXXXXXXXXX...
6800	OCT	1954	X...XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
6800	APR	1955	XXXXXXXXXXXXX.....XX....X
6800	MAY	1955	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
6800	JUNE	1955	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXX..
6800	JULY	1955	...X.XXXXXXXXXXXXXXXXXXXXXX.X.XXXX
6800	AUG	1955	XXXXXXXXXXXXXXXXXXXXX..XXXXX.XXXXXXX
6800	SEPT	1955	XXXXXXXXXXXXXXXXX...X.....X....
6800	OCT	1955	XXXXXXXXXXXXXXX..XXXXXXXXX..
6800	APR	1956	XX..XXXXX.XXX.XX.....
6800	MAY	1956	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
6800	JUNE	1956	XXXXXXXXXXXXXXXXXXXXX..XXX...X.X....X
6800	JULY	1956	XXXXX..XXXXX..XXXXXXXXXXXXX.XXXXXX
6800	AUG	1956	.X..XXXXXXXXXXXXX.XXXXXXXXXXX..XXX
6800	SEPT	1956	...XXXXXXXXXXXXXXX..XXXXXXXXXX
6800	OCT	1956	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.....
6800	APR	1957	...XX.X.....XXXXXXXXXXXXX..XXXXX
6800	MAY	1957	XXXXX.XXXXXXXXXX.XXXXXXXXXXXXXXX
6800	JUNE	1957	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXX..
6800	JULY	1957	.XXXXX.XXXXXXXXXX.XXX.XXXXXX.XXXX
6800	AUG	1957	XXXXX.XXX...XXXXXXXXX..XX....XXX.
6800	SEPT	1957	.X..XX.XXXXXXX...XXXXXXXXXXXXX
6800	OCT	1957	X.....XXXXXXXXXXXXX.....XXXXX
6800	APR	1958	XXXXX.XXXXXXXXXXXXXXXX.XXX
6800	MAY	1958	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.X
6800	JUNE	1958	XXXXXXXXXX.XXXXXX.XXXX.XXXXXXXXXX
6800	JULY	1958	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
6800	AUG	1958	XXXXXXXXX..XXXXXXXXXXXXXXX..XXX.X
6800	SEPT	1958	.XXXXXXXXXXXXX...XXXXXXXXXXXXX...
6800	OCT	1958	.XXXXX.XXXXXXXXXXXXXXXX
6800	APR	1959	.XXXXX...XXXXXXXXXXXXX.....XXXXX
6800	MAY	1959	XXXXXX.XXXXXXXXXXXXXXXX
6800	JUNE	1959	XXXXXXXXXXXXX.X.XXX.XXXXXXXXXXXXXX
6800	JULY	1959	X.XXXXXXXXXXXXXXXX
6800	AUG	1959	X.XXXXXXX.XXXX...X..XX.XX..XXX
6800	SEPT	1959	XXXXXXXXX.XXXXXXXXXXX..XXXXXX...
6800	OCT	1959	.XX.....XX.XXXXXX.....
6800	APR	1960	.XXXXXXXXXXXXX..XXXXXXX..X.XXX
6800	MAY	1960	XX..XX..XXXXX..XXXXXX.XXXXXXXXXX

STA'N	MO.	YR.	X = GOOD DAY	. = BAD DAY
6800	JUNE	1960	XXXXXXXXXXXXXXXXXX.XX.X.XX..X.XXX	
6800	JULY	1960	XX.XXXXXXXXXX.XX.XXXXXXXXXX.XXXXXXXXXX	
6800	AUG	1960	XXX.XXXXXXXXXXXXXXXXXXXXXX..X.XXXXXX	
6800	SEPT	1960	XXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXX	
6800	OCT	1960	XXXXXXXXXXXXXXXXXXXXXXXXXX..X.XXXXXX.	
6800	APR	1961	XX....XX.....XXX..XXX....XXX	
6800	MAY	1961	XXXXX..XXX.XX..XXXXXXXXXX.XXXXXXX	
6800	JUNE	1961	XXXXXXXXXXXXX..XXX.XXXXXXXXXX.XX..	
6800	JULY	1961	XXXXXX.XXXXXXXXXX..XXXXXXXXX.X.XX.X	
6800	AUG	1961	XXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXX	
6800	SEPT	1961	XX.XXXXXXXXXXXXXXXXXXXXXXXXXX.....	
6800	OCT	1961	.XXX.....X...XXXXXXXXX.....	
6800	APR	1962	...X.....XXXXXXXXXXXXXXXXXXXXX	
6800	MAY	1962	XXX..XXXXXXXXXXXXXXXXXX.XXXXXXXXXXX	
6800	JUNE	1962	.X....X....XXXXX.XXXXXXXXXXXXXX	
6800	JULY	1962	XXXXXXXXXXXXX.....XXXXXXXXX.XXXXXX	
6800	AUG	1962	XXXXX.X.XXX.XXXXXXXXXXXXXXXXXX..X.XX	
6800	SEPT	1962	XXXXXX.XXX..XX..XXXXXXXXXXXXXXXXX.X	
6800	OCT	1962	XXX.XXXXXXX.XXXXXXXXXXXXXXXXXXXXXX	
6800	APR	1963	...XX.....XXX.XXX..XXXXXXXXXX	
6800	MAY	1963	XXXXXXXX.XXX..XXXXXXXXXX.XXXXX	
6800	JUNE	1963	XXXX.XXX..XXXXXXXXXX....XXXXXXXXX	
6800	JULY	1963	XXXXXXXXX.X..XX..XXXXXXXXXX.XXX.XX	
6800	AUG	1963	XXXXXXXXXXXXXXXXXX..XXXXXXXXX.X..XXXX	
6800	SEPT	1963	XXXXXXXXXXXXXX.XX..XXXXXXXXXXXXXXXXX	
6800	OCT	1963	XXX...XXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
6800	APR	1964	XXXXXXXXXX..XX.XXXXX..XXX	
6800	MAY	1964	XX.....XXXXXXXXXXXXXXXXXX..X.XXXXXX	
6800	JUNE	1964	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX	
6800	JULY	1964	XXXXX.XXXXXXXXXX.XXX.XXXX.XXX.X...	
6800	AUG	1964	XXXXX.XXX..XXXXXXXXXX.XXX.XXX.X....	
6800	SEPT	1964	...XXXXX..XXXXXXXXXX.XXXXXXXXXX.X..	
6800	OCT	1964	XXXXX.XXXXXXXXXXXXXX..XXX.....	
6800	APR	1965	XXXXX.....XXXXXX.XX	
6800	MAY	1965	XXXXXXXXXXXXXXXXX.X..X.XXXX.XXXXX..	
6800	JUNE	1965	.XXXXXXXXXXXXX..X.X...XXXXXX...XX	
6800	JULY	1965	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
6800	AUG	1965	XX.XXXXXXXXXX.XX..XXXXXXXXXXXXX...X	
6800	SEPT	1965	XXXXX.XXXXXXXXXX.....XXXX	
6800	OCT	1965	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
6800	APR	1966	.XXXXX..X....XX.....XXX.X.....	
6800	MAY	1966	XXXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXX.	
6800	JUNE	1966	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXX	
6800	JULY	1966	XX.XXXXXX.XXX.XXXX.XXXXX.XXXXXX	
6800	AUG	1966	XX....XXX..XXX..XXXXXXXXXXXXX.X.X	
6800	SEPT	1966	..XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
6800	OCT	1966	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
1080	APR	1939	XXXXX..XXX.XXXXXXXXXXXXXXXXXX	
1080	MAY	1939	XXXXX.X.XXXXXXXXXXXXXX.XXX.XXXXXXX	
1080	JUNE	1939	XX...X...XX..X..XX..X.X.XXXXXX	
1080	JULY	1939	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXX.	

STATION MO. YR. X = GOOD DAY . = BAD DAY

1080	AUG	1939	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXX
1080	SEPT	1939	XXXX.XX.XX...XXXXXXXXXX...XX.XX
1080	OCT	1939	..XXXXXXXXXXXXXXXXXXXXX.....XX
1080	APR	1940	XX..XXXX.....XXX.X
1080	MAY	1940	XXXXXXXXXXXXXXXXXXXXX.XXXX
1080	JUNE	1940	X.XXX..XXXXXXXXXXXXX..XXXXX.XXX
1080	JULY	1940	XX..XXXXXX.X...XXXXX..XXXXXX
1080	AUG	1940	XX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1080	SEPT	1940	XXX.....XXXXX.XXXXXXX..XXXXXX
1080	OCT	1940	XXXXXXXXXXXXXXXXXXXXX.....
1080	APR	1941	..XXXXXXXXXX.XXX..XXXXXXXXXXXXX
1080	MAY	1941	X.XXXXX.XXXX..XXXXXXXXXXXXX..X.X..
1080	JUNE	1941	.X.XXXXXXXXXXX..XXXXXXXXXX..XXXXX
1080	JULY	1941	XXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXXX
1080	AUG	1941	XX.XXXXXXXXXXXXXXXXXXXXX.XX..XX.XXXX
1080	SEPT	1941	X.XX...XXXXXXXXXXXXX...X.....XXX
1080	OCT	1941	XXXXXXXX.XXXXXXXXXXXXXXXXXXXXXX..XXX
1080	APR	1942	.X.....XXXXX.XXXXXX.XX.XXXXX
1080	MAY	1942	XXXXXXXXXX.XX...XXXXXXXXXX..X..XX
1080	JUNE	1942	XXXXXXXXXXXXX..XXXXXXXXXXXXXXXXX..XXX
1080	JULY	1942	XXX..XXXXX..XXX..XXXXXXXXXXXXX...
1080	AUG	1942	XXXXXXXXXXXXX..XXXXXXX.XXX.XXXX..X
1080	SEPT	1942	..XXXXXX..X.....XXXXX..XXXXX
1080	OCT	1942	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XX.....
1080	APR	1943	...XXXXX.XXXXXXXXXXXXXXXXXXXXXX.XXXXX
1080	MAY	1943	XXX.XX.X...XXXXX.XXXXXXXXXXX.XXX.X
1080	JUNE	1943	XXXXX..XXXXX.XXX.XXX..X...XXX.X
1080	JULY	1943	XXXXXXXXXXXXXXXXX..XXXXXXXXXXXXX.XX.
1080	AUG	1943	XX.X.X.XXX..XXXXXXXXXX..XXXXXXXXXX
1080	SEPT	1943	..XXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXX
1080	OCT	1943	XXXXXXXXXXXXXXXXXXXXX.....XXXXX..
1080	APR	1944	.XXX.XXXXXX..XXX..XXXXXXXXXXXXX.
1080	MAY	1944	.XXX.XXXXXXXXXXXXXX.X.X.XXXXXXXXXX.X
1080	JUNE	1944	XXX.XXXXXXX..XXXXXXXXXXXXX..XXXX
1080	JULY	1944	..XXX.X.XXXXXXXXXXXXXX..XX.XXXX...
1080	AUG	1944	XXXXX..XX.X..X.XXXXXXXXXXXXXX.XXX
1080	SEPT	1944	XXXXXXXXXXXXXXXXXXXXX.X.XXXXXXXXXXX..
1080	OCT	1944	..XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXX.
1080	APR	1945	XXXXX.....XX
1080	MAY	1945	XXXXXXXXX.XX...XX..X.XXXXXXXXXXXXXX
1080	JUNE	1945	XXXXX.XXXXXX.XXXXXXXXXXXXXX..XXX
1080	JULY	1945	XXXXXXXXXXXXXXXXX.X..XXXXXXXXXXXXX.X.X
1080	AUG	1945	XX.XXXXXXX.XXXXXXXXXXXXXX.XX..XX
1080	SEPT	1945	XXXXXXXXXXXXXXXXXXXXX.....XXX
1080	OCT	1945	XX.XXXXXXXXXXXXXX.XX.XXXX.....
1080	APR	1946	..X.X.XXXXXXXXXXXXXXXXXXXXXXXXXXX
1080	MAY	1946	XXXXX..XXXXX..XXXXXXXXXXXXXXXXX.XXX
1080	JUNE	1946	XXXXX..XXXXXXXXXXXXXXXXX.X..XX...X
1080	JULY	1946	XX.X.X..XXXXX.XXXXXXXXXXXXXXXXXXX
1080	AUG	1946	XXXXX.XXXX.XXX..XXXXXXX.X..XXXX
1080	SEPT	1946	XXX.....XXXXXXXXXXXXXXXXXXXXX.XXX

STA'N MO. YR. X = GOOD DAY . = BAD DAY

1080	OCT	1946	...XXXX.XXXX..XXXXXXXXXX.....
1080	APR	1947	XXX.XX...XXXXX...XXXXXXX
1080	MAY	1947	XXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX..
1080	JUNE	1947	..XX.XX..XXXXXX.XXXXXX.....X
1080	JULY	1947	XXXXXXXXXXXXXXXXXX.XXXX.XXXXXXXXXXX.
1080	AUG	1947	XXXX.XXX.X.XXX.XXXXXX.XX..XXXXX
1080	SEPT	1947	XXX.XX.XXXXXX.XXX...X.XXXXXXXXXXX
1080	OCT	1947	XXX..X...XXXXXXXXXX...XXXXXXXXXX
1080	APR	1948	XXXX..XXX.....
1080	MAY	1948	XX...XXXXXXXXXX..XXXXXXXXXX
1080	JUNE	1948	XXXXXXXXXX..XX..XXXXX..X...XXXX
1080	JULY	1948	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXX
1080	AUG	1948	XXXXXXXXX..XX.XX.XXX.XXXXXXXXXXXXX
1080	SEPT	1948	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXX
1080	OCT	1948	XXXX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1080	APR	1949	.XXXXXXXX.XXXX.XXXXXXXXXXXXXXXXXXX.
1080	MAY	1949	XXXXXXXXXXXXXXXXXXXXX..XX...XXXXXXXXXX
1080	JUNE	1949	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXX..XXX.X
1080	JULY	1949	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXX.XXXXXXX
1080	AUG	1949	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XX.X.XXXXXX
1080	SEPT	1949	XXXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX.
1080	OCT	1949	XXXX...X...XXX.....XXXXX
1080	APR	1950	X.....XXXXX...XXXXX.X...XX
1080	MAY	1950	XX.X...XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXX
1080	JUNE	1950	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXXX
1080	JULY	1950	.XXXXXX.X..X...XXXXXXXXXXXXXXXXXX.XX
1080	AUG	1950	XXXXXXXXX..X.XXXXXXXXXXXXXXXXXX.XX.XXXX
1080	SEPT	1950	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.X...
1080	OCT	1950	...X..X..XXXXX.....XXXXXXXXXX
1080	APR	1951	.XXXXXXXXX.XXX..X.....XXXXXXXXX.
1080	MAY	1951	..XXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXX..XX
1080	JUNE	1951	XX.X..XXXXXXXXXXXXX.X..XXX.XX.XXXX
1080	JULY	1951	.XXX.X...XXXXX...XX.XXXX..XXX.XX
1080	AUG	1951	XXXXXXXXX.X...XXXXXXXXXX...X.....
1080	SEPT	1951	..XXXXXXXXX..XXXXXXXXX.....XXX
1080	OCT	1951	XXXXXXXXXXXXX.....
1080	APR	1952	...XXX...X..XXXXXXXXXXXXXXXXXXXXX.XX
1080	MAY	1952	XXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXXXXXX.X.
1080	JUNE	1952	.XXXXXXXXXX..XX.X.XXX...XXX.XXX
1080	JULY	1952	XXXXXXXXXXXXXXXXXXXXXXXXXX...XX.XXXXXXX
1080	AUG	1952	XXXXX..XXXXXX..XXXXXXXXXXXXXXXXXX...
1080	SEPT	1952	XXXXXXXXXX.XX..XXXXX.XXXXXXXXXXXXXX
1080	OCT	1952	XXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX
1080	APR	1953	..XX.....XX.X..XX...
1080	MAY	1953	..XXXXX.XX.XXXXXXXXXX...XXX.XXXXXX
1080	JUNE	1953	...XXXXXXXXXX.XXXXXX..XXX.XX.X.XX
1080	JULY	1953	XX..XXXXXXXXXXXXXXXXXXXXX..XX..XXX.XXX
1080	AUG	1953	XX.XXXX..XXXXXXXXXXXXXXXXXXXXX.XXXXXXX
1080	SEPT	1953	.XXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXX
1080	OCT	1953	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1080	APR	1954	X..XXX.X.....

STA'N MO. YR. X = GOOD DAY . = BAD DAY

1080	MAY	1954	..XXXXXXXXXX.XXXXXXXXXXXXXXXXXX.XXXX.
1080	JUNE	1954	.XX.....X.X.XXXXXXXXXXXXXXXXXX...XX
1080	JULY	1954	.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1080	AUG	1954	X...XXXXXXXXXX..X.XX..X...X..XXXXX
1080	SEPT	1954	XXXXX.XXXXXXXXXXX...XXXXXXXXXX....
1080	OCT	1954	X.....XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1080	APR	1955	XXXXX...X.XXX...X.XX.....X
1080	MAY	1955	XXXXXXXXX.XXXX...XX.X...XXXXXXXXXX
1080	JUNE	1955	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1080	JULY	1955	XXX.XXXXXXXXXXXXXXXXXXXXXX.XXXXXX
1080	AUG	1955	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1080	SEPT	1955	XXXXXXXXXX.XX.X..XXXXX.....XX....
1080	OCT	1955	.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..
1080	APR	1956	.XX...XX..XXXXX..XXX..X.....
1080	MAY	1956	XXXXX..XXXXXXXXXXXXXXXXXXXXXXXXX
1080	JUNE	1956	X.X..XXXXXXXXXXXXX...XXXXXXXXXXXXX...
1080	JULY	1956	.X.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXX
1080	AUG	1956	X.XXXXXXXXXX.XXXXXX..XXXXX...XXX.XX
1080	SEPT	1956	XXXXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXX
1080	OCT	1956	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX.....
1080	APR	1957	...X.....XXXXXXXXXXXXXXXXXXXXX
1080	MAY	1957	XXXXXX..XXXXX..XXXXXXXXXXXXXXXXXXXXX
1080	JUNE	1957	XXXXX.X..XXXXX..XXXXXXXXXXXXX.X..X
1080	JULY	1957	XXXXXX.XXXXXXXXXXXXXX.XXXXXXXXXXXXXX
1080	AUG	1957	..XXX.XXX..XX..XX..XXXXX...XXXXX
1080	SEPT	1957	XXX.XXXXXXXXXX.XXXX.XXXXXXXXXXXXXX
1080	OCT	1957	XX.....XXXXX.XXXXXX.....XXX
1080	APR	1958	X..XXXXX.XXXXXX.....XX
1080	MAY	1958	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..
1080	JUNE	1958	XXXXXXXXXX.XXXXXXX.XXXXXXXXXXXXXX...
1080	JULY	1958	.X.X..XXXXX.XXXXXXXXXXX.XXXXXXXXXXX
1080	AUG	1958	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXX.XXXX
1080	SEPT	1958	XXXXXXXXXXXXXXXXX...XXXXX.XXX.XXXXXXX
1080	OCT	1958	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1080	APR	1959	.XXX.X.XXXXXXXXXX..X.XXX...XXXXX
1080	MAY	1959	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX...XXX
1080	JUNE	1959	XXXXXXXXXX..XXXXXX.XXXXXX.....XXXX
1080	JULY	1959	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXX..XXX
1080	AUG	1959	XXXXXXXXXXXXX..XXXXX...X...XXX.XXX
1080	SEPT	1959	XXXXXXXXXX.XXXXXXXXXX..XX.XXXXXXXXXX..
1080	OCT	1959	XX.X.....XXXXXXXXXXXXXXXXXXXXX..XX
1080	APR	1960	.XXXXXXXXXXXXXXXXXXXXX.XXXXXX.....XXX
1080	MAY	1960	..XXXXXXXXXXXXX.X...XXXXX.XXXXXXX
1080	JUNE	1960	XXXXXXXXXXXXXXXXXXXXX..XXX...X...X.XX
1080	JULY	1960	.XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XX.XXXXXXXXX
1080	AUG	1960	XXXXXX.XXXXXXXXXX.XXXXXX.XX.XXXXXXXXX
1080	SEPT	1960	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XX.XXXXXXX
1080	OCT	1960	XXXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX..XX
1080	APR	1961	XX...XX..XX..XXX..XXXXX...XX
1080	MAY	1961	X.XXXX.....XXX..XXXXXXXXXXXXXXXXXX.XX
1080	JUNE	1961	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXX

1941	1940	1939	1938	1937	1936	1935	1934	1933	1932	1931	1930	1929	1928	1927	1926	1925	1924	1923	1922	1921	1920	1919	1918	1917	1916	1915	1914	1913	1912	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902	1901	1900	1899	1898	1897	1896	1895	1894	1893	1892	1891	1890	1889	1888	1887	1886	1885	1884	1883	1882	1881	1880	1879	1878	1877	1876	1875	1874	1873	1872	1871	1870	1869	1868	1867	1866	1865	1864	1863	1862	1861	1860	1859	1858	1857	1856	1855	1854	1853	1852	1851	1850	1849	1848	1847	1846	1845	1844	1843	1842	1841	1840	1839	1838	1837	1836	1835	1834	1833	1832	1831	1830	1829	1828	1827	1826	1825	1824	1823	1822	1821	1820	1819	1818	1817	1816	1815	1814	1813	1812	1811	1810	1809	1808	1807	1806	1805	1804	1803	1802	1801	1800	1799	1798	1797	1796	1795	1794	1793	1792	1791	1790	1789	1788	1787	1786	1785	1784	1783	1782	1781	1780	1779	1778	1777	1776	1775	1774	1773	1772	1771	1770	1769	1768	1767	1766	1765	1764	1763	1762	1761	1760	1759	1758	1757	1756	1755	1754	1753	1752	1751	1750	1749	1748	1747	1746	1745	1744	1743	1742	1741	1740	1739	1738	1737	1736	1735	1734	1733	1732	1731	1730	1729	1728	1727	1726	1725	1724	1723	1722	1721	1720	1719	1718	1717	1716	1715	1714	1713	1712	1711	1710	1709	1708	1707	1706	1705	1704	1703	1702	1701	1700	1699	1698	1697	1696	1695	1694	1693	1692	1691	1690	1689	1688	1687	1686	1685	1684	1683	1682	1681	1680	1679	1678	1677	1676	1675	1674	1673	1672	1671	1670	1669	1668	1667	1666	1665	1664	1663	1662	1661	1660	1659	1658	1657	1656	1655	1654	1653	1652	1651	1650	1649	1648	1647	1646	1645	1644	1643	1642	1641	1640	1639	1638	1637	1636	1635	1634	1633	1632	1631	1630	1629	1628	1627	1626	1625	1624	1623	1622	1621	1620	1619	1618	1617	1616	1615	1614	1613	1612	1611	1610	1609	1608	1607	1606	1605	1604	1603	1602	1601	1600	1599	1598	1597	1596	1595	1594	1593	1592	1591	1590	1589	1588	1587	1586	1585	1584	1583	1582	1581	1580	1579	1578	1577	1576	1575	1574	1573	1572	1571	1570	1569	1568	1567	1566	1565	1564	1563	1562	1561	1560	1559	1558	1557	1556	1555	1554	1553	1552	1551	1550	1549	1548	1547	1546	1545	1544	1543	1542	1541	1540	1539	1538	1537	1536	1535	1534	1533	1532	1531	1530	1529	1528	1527	1526	1525	1524	1523	1522	1521	1520	1519	1518	1517	1516	1515	1514	1513	1512	1511	1510	1509	1508	1507	1506	1505	1504	1503	1502	1501	1500	1499	1498	1497	1496	1495	1494	1493	1492	1491	1490	1489	1488	1487	1486	1485	1484	1483	1482	1481	1480	1479	1478	1477	1476	1475	1474	1473	1472	1471	1470	1469	1468	1467	1466	1465	1464	1463	1462	1461	1460	1459	1458	1457	1456	1455	1454	1453	1452	1451	1450	1449	1448	1447	1446	1445	1444	1443	1442	1441	1440	1439	1438	1437	1436	1435	1434	1433	1432	1431	1430	1429	1428	1427	1426	1425	1424	1423	1422	1421	1420	1419	1418	1417	1416	1415	1414	1413	1412	1411	1410	1409	1408	1407	1406	1405	1404	1403	1402	1401	1400	1399	1398	1397	1396	1395	1394	1393	1392	1391	1390	1389	1388	1387	1386	1385	1384	1383	1382	1381	1380	1379	1378	1377	1376	1375	1374	1373	1372	1371	1370	1369	1368	1367	1366	1365	1364	1363	1362	1361	1360	1359	1358	1357	1356	1355	1354	1353	1352	1351	1350	1349	1348	1347	1346	1345	1344	1343	1342	1341	1340	1339	1338	1337	1336	1335	1334	1333	1332	1331	1330	1329	1328	1327	1326	1325	1324	1323	1322	1321	1320	1319	1318	1317	1316	1315	1314	1313	1312	1311	1310	1309	1308	1307	1306	1305	1304	1303	1302	1301	1300	1299	1298	1297	1296	1295	1294	1293	1292	1291	1290	1289	1288	1287	1286	1285	1284	1283	1282	1281	1280	1279	1278	1277	1276	1275	1274	1273	1272	1271	1270	1269	1268	1267	1266	1265	1264	1263	1262	1261	1260	1259	1258	1257	1256	1255	1254	1253	1252	1251	1250	1249	1248	1247	1246	1245	1244	1243	1242	1241	1240	1239	1238	1237	1236	1235	1234	1233	1232	1231	1230	1229	1228	1227	1226	1225	1224	1223	1222	1221	1220	1219	1218	1217	1216	1215	1214	1213	1212	1211	1210	1209	1208	1207	1206	1205	1204	1203	1202	1201	1200	1199	1198	1197	1196	1195	1194	1193	1192	1191	1190	1189	1188	1187	1186	1185	1184	1183	1182	1181	1180	1179	1178	1177	1176	1175	1174	1173	1172	1171	1170	1169	1168	1167	1166	1165	1164	1163	1162	1161	1160	1159	1158	1157	1156	1155	1154	1153	1152	1151	1150	1149	1148	1147	1146	1145	1144	1143	1142	1141	1140	1139	1138	1137	1136	1135	1134	1133	1132	1131	1130	1129	1128	1127	1126	1125	1124	1123	1122	1121	1120	1119	1118	1117	1116	1115	1114	1113	1112	1111	1110	1109	1108	1107	1106	1105	1104	1103	1102	1101	1100	1099	1098	1097	1096	1095	1094	1093	1092	1091	1090	1089	1088	1087	1086	1085	1084	1083	1082	1081	1080	1079	1078	1077	1076	1075	1074	1073	1072	1071	1070	1069	1068	1067	1066	1065	1064	1063	1062	1061	1060	1059	1058	1057	1056	1055	1054	1053	1052	1051	1050	1049	1048	1047	1046	1045	1044	1043	1042	1041	1040	1039	1038	1037	1036	1035	1034	1033	1032	1031	1030	1029	1028	1027	1026	1025	1024	1023	1022	1021	1020	1019	1018	1017	1016	1015	1014	1013	1012	1011	1010	1009	1008	1007	1006	1005	1004	1003	1002	1001	1000	999	998	997	996	995	994	993	992	991	990	989	988	987	986	985	984	983	982	981	980	979	978	977	976	975	974	973	972	971	970	969	968	967	966	965	964	963	962	961	960	959	958	957	956	955	954	953	952	951	950	949	948	947	946	945	944	943	942	941	940	939	938	937	936	935	934	933	932	931	930	929	928	92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STA'N MO. YR. X = GOOD DAY . = BAD DAY

1080	JULY	1961	XXXXXXXXXXXXXXXXXX..XXX.X..XX...XX
1080	AUG	1961	XXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXX
1080	SEPT	1961	XXXXXXXXXX..XXXXXXXXXX..XXXX.XX.X
1080	OCT	1961	XXXXXX..X..XXXX..XX.....X...XX
1080	APR	1962	.XXXX.....XXX.XXXXXXXXXXXXXXXXXXX
1080	MAY	1962	XXXXX..XXXXX.XXXXXX.XX.XXXXXXXXXX
1080	JUNE	1962	XX.XXXXXX..XXXXX.XX.XXXXXXXXXXX
1080	JULY	1962	X.XXX.X.X.XXXXXXXXXXXXXXXXXXXXXX.XXX
1080	AUG	1962	XXXX.XXXXXXXXXXXXXXXXXXXXXXXXXX.X..XX
1080	SEPT	1962	..XXX...XXXXXXXXXXXXXXXXXXXXXXXXXX
1080	OCT	1962	XXXXXXXXXXXXXXXX.XXXXXXXXXX..XXXXXXXXXX
1080	APR	1963	..XXXX..XXXXXXXXX..XX..XXXXX.XXX
1080	MAY	1963	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1080	JUNE	1963	XX.XXX..XXXXXXXXXXXXXXXXXX..XX.XX...
1080	JULY	1963	XXXXXXXX..X.XXXX..XXXXXXXXX..XX.XXX
1080	AUG	1963	.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1080	SEPT	1963	XXXXXXXXXXXX.XX....XXXXXXXXXXXXXXXXXX
1080	OCT	1963	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1080	APR	1964	.XXX...XXX.XXX...XX.X.XXX.XXXX
1080	MAY	1964	X.....XX.XXXXXXXXXXXXXXXXXX.XXXXXX
1080	JUNE	1964	XXXXXXXXXXXXXXXXXX....XX..XXXXXXXXXX
1080	JULY	1964	XX.X.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1080	AUG	1964	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1080	SEPT	1964	...XXXXX.XXXXXXXXXX..X..XXX..X.XX
1080	OCT	1964	XXXXXXXXXX..XXXXXXXXXXXXXXXXXX.....
1080	APR	1965	...X..XXX..XX.....X.XXXXXXXXXXX
1080	MAY	1965	.XXXXXXXXXXXXXXXXXXXXXXXXXX.XX...XXXX..
1080	JUNE	1965	XXXXXXXXXXXX.XX.....XXXXX.....X
1080	JULY	1965	XXXXX.....XXXXXXX..XXXXX..XX
1080	AUG	1965	XXX..XXXXXXXXXXXXXXXXXXXXXXXXX.X...X
1080	SEPT	1965	XXXXX...X.....XXXX....XX
1080	OCT	1965	XXXXX.XX.XXXXXXXXXXXXXXXXXXXXXXXXXX
1080	APR	1966	XXXXXX.XX.X.XX.....XXX.....
1080	MAY	1966	XXXXXX.XX.XX.XX.XXXXXXXXXXXXXX.X..
1080	JUNE	1966	.X...XXX..XXXXXXXXXXXXXXXXX.XXXXXX
1080	JULY	1966	...XXXXXXXXX.XXXXXXXXXX.XX.XXXXXX
1080	AUG	1966	XX...XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.X
1080	SEPT	1966	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1080	OCT	1966	.XXXXXXXXXX.....XXXXXXXXXX.XXXX
1085	APR	1921	X.....XXXXXXXXXXXXXXXXXX.XXXXX..
1085	MAY	1921	XXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXX.XXXXX
1085	JUNE	1921	X.XXXXXXXXXXXXXXXXXXX.XXXXXXXXXXX
1085	JULY	1921	XXXXXX.XXXX.XXXXXXXXXX..XXXXX
1085	AUG	1921	XXX..XXXXXX.XXXXX..XXXXXXXXXXXXXXXX
1085	SEPT	1921	XXXXXXXXX.....XXXXXXXXXXXXXXXXXXXXX
1085	OCT	1921	XXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXX
1085	APR	1922	.XXX.XX.....XXX...XXXXXX
1085	MAY	1922	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
1085	JUNE	1922	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..X
1085	JULY	1922	XXXXXX..XXXXXXXXXXXXXXXXXX.XXXXXXX
1085	AUG	1922	XXXXX.X.XXXXX.XXXXX.XXXXXXXXXXXXXX

1947	1948	1949
1000	1000	1000
1001	1001	1001
1002	1002	1002
1003	1003	1003
1004	1004	1004
1005	1005	1005
1006	1006	1006
1007	1007	1007
1008	1008	1008
1009	1009	1009
1010	1010	1010
1011	1011	1011
1012	1012	1012
1013	1013	1013
1014	1014	1014
1015	1015	1015
1016	1016	1016
1017	1017	1017
1018	1018	1018
1019	1019	1019
1020	1020	1020
1021	1021	1021
1022	1022	1022
1023	1023	1023
1024	1024	1024
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1032	1032	1032
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1034	1034	1034
1035	1035	1035
1036	1036	1036
1037	1037	1037
1038	1038	1038
1039	1039	1039
1040	1040	1040
1041	1041	1041
1042	1042	1042
1043	1043	1043
1044	1044	1044
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1048	1048	1048
1049	1049	1049
1050	1050	1050
1051	1051	1051
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1063	1063	1063
1064	1064	1064
1065	1065	1065
1066	1066	1066
1067	1067	1067
1068	1068	1068
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1070	1070	1070
1071	1071	1071
1072	1072	1072
1073	1073	1073
1074	1074	1074
1075	1075	1075
1076	1076	1076
1077	1077	1077
1078	1078	1078
1079	1079	1079
1080	1080	1080
1081	1081	1081
1082	1082	1082
1083	1083	1083
1084	1084	1084
1085	1085	1085
1086	1086	1086
1087	1087	1087
1088	1088	1088
1089	1089	1089
1090	1090	1090
1091	1091	1091
1092	1092	1092
1093	1093	1093
1094	1094	1094
1095	1095	1095
1096	1096	1096
1097	1097	1097
1098	1098	1098
1099	1099	1099
1100	1100	1100

STA'N MO. YR. X = GOOD DAY . = BAD DAY

1085	SEPT	1922	XXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX
1085	OCT	1922	XXX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1085	APR	1923	XXXXXXXXXXXXXXXXXXXXXXXXX..
1085	MAY	1923	.XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XX..
1085	JUNE	1923	XXXXX...XXXXXX.....XXXXXX
1085	JULY	1923	.X.X.X..XXXX.XXXXXXXXXXXXXXXXXX..
1085	AUG	1923	.XX..XXXXXXXXXXXXXXXXXX.XXXXXXXXXXX
1085	SEPT	1923	XXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXX
1085	OCT	1923	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1085	APR	1924	.X.XXXX.X.XXX..XXXXXXXXX..XXXXXX
1085	MAY	1924	XXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXX.XXXXXX
1085	JUNE	1924	XXXXX.X.XXXXXX..XXX...XXXXXXX..XX
1085	JULY	1924	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXX..XX
1085	AUG	1924	X..XXXXXXXXXXXXXXXX.XXXXXXXXXXX
1085	SEPT	1924	XXXXXXXXXXXXXXXXXXXXXXXXX...XXXXX.XXXX
1085	OCT	1924	XX..XXXXX...XXXXXXXXXXXXXXXXXXXXX
1085	APR	1925	...XXXXXXXXXX..XXX.XXX...XX.XXX
1085	MAY	1925	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.X.XXXXXXX
1085	JUNE	1925	XX.XX.XXX.X.XXXX.XXXX.XXXXXX.XX
1085	JULY	1925	XXXXX..XXXXXXXXXXXXXXXX.XXX.XXXXXXXXX
1085	AUG	1925	XXXXXXXXXXXXXXXXXX...XXXXX..XXXXXXXXXX
1085	SEPT	1925	XXXXX..XX...XXX.X..XXXXXX.....
1085	OCT	1925	..XX.....XX.X..XXXXX.....
1085	APR	1926	XXX.XXXXXXXXXXXXXXXXXXXXXX
1085	MAY	1926	.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1085	JUNE	1926	XXXXXXXXXXXXX.X...XXX..XXXXXXXXXXXX
1085	JULY	1926	..XXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXXX
1085	AUG	1926	.XXX.XX..XX...X.XX.XXXXXXXXX.XXX.
1085	SEPT	1926	...X.X..X..XXX...XX.....XXXXX
1085	OCT	1926	XXXXXX.....XXXXXXXXXXXXXXXXXXXXX
1085	APR	1927	.XXXXXXXXX.XXXXXXXXXX..XXXXXXXXXXXX.
1085	MAY	1927	.XX..X..XXXXXXXXXXXXX...XXX.XXXX..X
1085	JUNE	1927	..XXXXX...XX.XXXXXXXXXXX.X..X.X
1085	JULY	1927	XX.XXXXXXXXXX.X..X...XXXXXX..XXX
1085	AUG	1927	.XX.X.XXXXXXXXXXXXXX.X..XXXXXXXXX.XX
1085	SEPT	1927	XXXXX...X.XX..XXXXXXXXXXXXXXXXX..
1085	OCT	1927	XXX...XXX..XXXXX.XXXXXXXXXXXXXX
1085	APR	1928	XX.....XXXXXXXXXXXX
1085	MAY	1928	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1085	JUNE	1928	XX.....X.XXXX...X.....XXXXX.
1085	JULY	1928	.XXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXX..
1085	AUG	1928	.XXXXXXXXXXXXX.XXXXXX..X...XXXXX
1085	SEPT	1928	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1085	OCT	1928	XXXXXXXXXXXX..XXXXX.XXXXXXXXXXX..XXX
1085	APR	1929	.X.....XXXXXXXXXXXXX...XXX...
1085	MAY	1929	XX..XXXXXXXXXX..XXXXXXXXXXXXXXXXXX
1085	JUNE	1929	...XXXXXXXXXXXXXXXXX.XXXXXXXXXXXXX
1085	JULY	1929	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1085	AUG	1929	XXXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX
1085	SEPT	1929	..X.XX...XXXXXXXXXXXXXXXXXXXXX
1085	OCT	1929	XXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXX.....

STA'N MO. YR. X = GOOD DAY . = BAD DAY

1085	APR	1930	XXXXXXXXXXXXXXXXX...XXX.XXX..X..XX
1085	MAY	1930	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXX.X.
1085	JUNE	1930	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX...XX..XXX
1085	JULY	1930	XXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXX
1085	AUG	1930	X.XXXXXXXXXXXXXXXXXXXXXX.XXXXX..XXXX
1085	SEPT	1930	XXXXXXXXXXXXXXXXXX.XX..XX....XXX..
1085	OCT	1930	XXXXXXXXX.....XXXXXXXXXXXXX
1100	APR	1931	...XXXXX..XXXXXXXXXX.....XXXXXXXXXXXXX
1100	MAY	1931	XX..XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1100	JUNE	1931	XXXXXXXXX..XXXXXXXXXX..XXXXXXXXXXXXX.
1100	JULY	1931	XXXXX..XXXXXXX.X.XX.XXXXXXXXXXXXXXX
1100	AUG	1931	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXX
1100	SEPT	1931	XXXXXXXXX...X..XXXXX.....XXXXXXXXXXXXX
1100	OCT	1931	XXXXX..XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1100	APR	1932	.XXXXXXXXXXXXXXXXX.XXXXX.....XX
1100	MAY	1932	XXXXXXXXXXXXXXXXXX.XXXXXX...XX.XXXXX
1100	JUNE	1932	XXXXXXXXXXXXXXXXXXXXX..XXXXX
1100	JULY	1932	XX..XXXXXXXXXXXXXXXXX.XXXXX.XXXXXXX
1100	AUG	1932	XXXXXXXXXXXXX.XXXXXXXX.XXXXXXXX..X
1100	SEPT	1932	XXXXXXXXX.XXXXXXXX...XX.XXXXXX
1100	OCT	1932	XXXXX...X.XXXX...XXXXXXXXX.....
1100	APR	1933	.X..X.....XX.....XXXXXXXXX..X
1100	MAY	1933	XXXXXX..XXXXXX..XXXXXXXXXXXXXXXXXXXXX
1100	JUNE	1933	XXXXX.XXXXXXXXXXXXXXXXXX.XXXXX..X
1100	JULY	1933	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
1100	AUG	1933	.XXX.XXXXXXXXXXXXXX..XXXXXXXXXXXXX..
1100	SEPT	1933	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1100	OCT	1933	XXXXXXXXXXXXXXXXX.XXXX.....
1100	APR	1934	.XXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX..
1100	MAY	1934	.XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
1100	JUNE	1934	XX....XXXXXXXXXXXXX.XXXXXXXX.XX
1100	JULY	1934	.X.XXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXX
1100	AUG	1934	XXXXXXXXXXXXX.XXXXXX.X..XXXXXX.X
1100	SEPT	1934	XXXXXX.XXXX..XXX.....XXXX
1100	OCT	1934	XXXXXXXXXXXXXXXXX.....XX.XXX.....
1100	APR	1935	XX..X.XXXXX..XX..XX.
1100	MAY	1935	XXXXX..XX....XXX..XXXXX.XXXXX..
1100	JUNE	1935	.XXXXXXXXXXXXX.....XXXXXXXXXXXXX
1100	JULY	1935	XXXXX.XXXXXXXXXXX..XXXXXXXXXXXXX.XX.
1100	AUG	1935	.XXXXXXXXXXXXX..XX..XXXXXXXXXXXXXX
1100	SEPT	1935	XXXXX.XXXXXXXXXXXXXX.XXXXXX
1100	OCT	1935	XXXXXX..XXXXXXXXXX.....XXX.....
1100	APR	1936	XXXXXXXXXXXXX.X...XX.XXX
1100	MAY	1936	XXXXXXXXXXXXX.XXXXXXX..X.XXXXXXX..
1100	JUNE	1936	XXXXX..X.XXXXX.XXXXXXXXXXXXXXXXXX
1100	JULY	1936	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1100	AUG	1936	XXXXXXXXXXXXX.X.XX..X.XXXXXXXXXXX
1100	SEPT	1936	XXXXXXXXXXXXX..XXXXXXXXX..X.XXXXX
1100	OCT	1936	XXXXXXXXXXXXXXXXXXXXX.....XXX..
1100	APR	1937	XXXXXXXXXXXXX...XXXXXX
1100	MAY	1937	XXXXX..XXXXXXX.XXXXX.X..XXXXXXXXX

STA'N MO. YR. X = GOOD DAY . = BAD DAY

1100	JUNE	1937	X.X.X..XX...XXXXXXXXXXXXXXXXXXXXX.
1100	JULY	1937	X.XX.XXXXX...XXXXXXXXXXXXXXXXXXXXX.
1100	AUG	1937	.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1100	SEPT	1937	XXXXX.XXXXXXXXXXXXXXXXXXXXXX...X.....
1100	OCT	1937	XX...XXXXX...XXXXXXXXXXXXXXXXXXXXX..
1100	APR	1938	XXXXXXXXXXXXX.XX...XXXXX
1100	MAY	1938	X.X.....XXXXXX...XXXXX.XXXX.XX
1100	JUNE	1938	XXXXXXXX..XXXXXXXXXXXXXXXXXXXXX..XXX
1100	JULY	1938	..XXX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1100	AUG	1938	.XXXX..XXXXXXXXXXXXX.XX.XXXXXXXXXXX
1100	SEPT	1938	XXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXXX
1100	OCT	1938	XX.....XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	APR	1938	XXXXXXXXXXXXX.XXX...XXXX
3880	MAY	1938	..XXXX..XXXXXXX..XXXXXXXXXXXXXXXXXX
3880	JUNE	1938	XXXXXXXXXX.XXXXXX.XXXX.XXXXXXXXXX.
3880	JULY	1938	.XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXX
3880	AUG	1938	XXXXXXXXX.XXXXXX..XXX.XXXX.XXXXXXXXX
3880	SEPT	1938	XXXXX.X..XXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	OCT	1938	XX.....XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	APR	1939	XXXXX.XXX..XXXXXXXXXXXXXXXXXXXX
3880	MAY	1939	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XX..XXXXXX
3880	JUNE	1939	XXXXX..XXX..X...XXXXXX..XXXXXX
3880	JULY	1939	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	AUG	1939	XXXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	SEPT	1939	XXXXX..XXXXXXXXXXXXXXXXXXXXX...X..XX
3880	OCT	1939	XXXXXXXXXXXXXXXXXX..XXXXXXXXX.....XX
3880	APR	1940	XX.....XX..XXXXX..X...XXXXX
3880	MAY	1940	XXX.X.XXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXX
3880	JUNE	1940	XXXXXXXXX.XXXXXXXXXXXXXXXXXXX..XXX.XXXX
3880	JULY	1940	XXXXX.XXXXXXXXXXXXXXXXXXXXXXX..XXXX
3880	AUG	1940	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	SEPT	1940	XXXXXXXXXXXXXXXXXX.XXXXXX..XXXXXXXXXX
3880	OCT	1940	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.....
3880	APR	1941	.XXXXXXXXXXXXX...X...XXXXXXXXXXXXXXXXX
3880	MAY	1941	XXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX..XX..
3880	JUNE	1941	.X..XXXXX.XXXXXXXXXXXXXXXXXXXXXX..X
3880	JULY	1941	.XXXXXXXXXXXXX.XXXXXXXXXXXXXX.XXXXXXX
3880	AUG	1941	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXX
3880	SEPT	1941	X.XXX.XXX.XXXX.XXXXXXX.....XXX
3880	OCT	1941	XX..XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XX
3880	APR	1942	.X.....XXXXX.XXXXXX.XX.XXXXXX
3880	MAY	1942	XXX.XXXX..X...XXXXXXXXXX..XXXXXX
3880	JUNE	1942	XXX..XXXXX.XXXXXX..XXXXX..XXX
3880	JULY	1942	XXXXXXXXXXXXXXXXXXXXX.XXXXXX.....X..XX
3880	AUG	1942	XXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXX.X
3880	SEPT	1942	XXXXXXXXXX.XXXX...XX.XXXXXXXXXXX
3880	OCT	1942	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XX.XXXX
3880	APR	1943	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXX
3880	MAY	1943	XXXXXXXXX...XX.XXXXXXXXXXXXXXXXXXX
3880	JUNE	1943	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXX.
3880	JULY	1943	XXXXXXXXX.XXXXXX..XXXXXXXXXX.XXXXXXX

STA'N MO. YR. X = GOOD DAY . = BAD DAY

3880	AUG	1943	XX.X.XXXXXXXXXXXXXXXXXX.XXXXXXXXXXX
3880	SEPT	1943	XXX.XXXXXXXXXXXXXX..XXXXXXXXXXXXX
3880	OCT	1943	XXXX.XXXXX..XXXXXXXXXX...XXXXXX..
3880	APR	1944	.XXX...XXXXXXXXXXXXXXXXXXXXXXXXXX.
3880	MAY	1944	XXXXXXXXXXXXXXXXXXXXX.X.XXXXXXXXXX.
3880	JUNE	1944	XXX.XXXXXXX..XXXXXX.XXXXX.XXXX
3880	JULY	1944	XXX.X.X.XXXXXXXXXXXXXXXXXXXXXXXXXX
3880	AUG	1944	XXXXXXXXXXXXX..X.XXXXXXXXXX..XX.XXX
3880	SEPT	1944	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..
3880	OCT	1944	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	APR	1945	...XX...XX..X...XXX...X..XX
3880	MAY	1945	XXXXXX..XXXX.XX...XX.XXXXXXX
3880	JUNE	1945	X.X...XXXXX..XXXXXXXXXXXXX..XXX
3880	JULY	1945	XXXXXXXXXXXX.XXXXX.XXXXXXXXXXXXXX
3880	AUG	1945	XXXXXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXX
3880	SEPT	1945	XXXXXXX.XXXXXX.....XXX
3880	OCT	1945	XXXXXXXXXXXXXXXXXXXXXXXXXX.XX...XXX.
3880	APR	1946	X.XXXXXXXXXXXXXXXXXXXXXXXXXX
3880	MAY	1946	XXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXX..XX
3880	JUNE	1946	X.XXX..XXXXXXXXXXXXXXXXX...XXXXXX
3880	JULY	1946	XXXXXXXXX..XXXXXXXXXXXXXXXXXXXXXXXXX
3880	AUG	1946	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XX.XXXX
3880	SEPT	1946	XXXX...XXXXXXXXXXXXXXXXXXXXX..XXX
3880	OCT	1946	...XXXX..XX...XXXXXXXXX.....
3880	APR	1947	XXXXXXXXX.XXXXX..XXXXXXXXXX
3880	MAY	1947	XXXXXXXXXXXXXXXXX.XXXXX.XXXXXXXXXXX
3880	JUNE	1947	XXX..XXXXXX.XXXX..XXX..XX
3880	JULY	1947	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	AUG	1947	XXXXX..X.XXXXX..XXXXX..XXXXXXXXXX
3880	SEPT	1947	XXXXXXXXXXXXX.XX.....XXXXXXXXXXXXX
3880	OCT	1947	XXX.XXX.XXXXXXXXXXX.....XXXXXXXXXX
3880	APR	1948	XXXXXXXXXXXXX...X.X
3880	MAY	1948	XXXXXX...XXXXXXXXXX.X..XXXXXXXXXX
3880	JUNE	1948	XX.XXXXXX..XXX..XX.....XXXXXX
3880	JULY	1948	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXX
3880	AUG	1948	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	SEPT	1948	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	OCT	1948	XXXX.XXXXXXX.XXXXXXXXXXXXXXXXXXXXX
3880	APR	1949	XXXXXXXXX.XXXX.XXXXXXXXXXXXXXXXXXX
3880	MAY	1949	XXX.XXXXXXXXXXXXXX..X...XXXXXX...
3880	JUNE	1949	XXXXXXXXXXXXXXXXX..XXXXXXXXXX.XXXX
3880	JULY	1949	XXXXXXXXXXXXX..XXXXXX..XXXXXXXXXXXXX
3880	AUG	1949	XXXXXXXXXXXXX.XXXXXXXXXXXXXX.XXXXX
3880	SEPT	1949	X.XXXXXXX..XXXXXXXXXXXXXXXXXXXXX.
3880	OCT	1949	XXXXX.X.X...XXXXX.....XXXXXXXXXX
3880	APR	1950	X.....XXXXXXXXXXXXX.X....XX
3880	MAY	1950	X...XXXXXXXXXXXXX.XXXXXX..XXXXXXXXXX
3880	JUNE	1950	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.X..XXXX
3880	JULY	1950	.XXXXX.XXXXXX.XXXX.XXXXXXXXXXXXXX
3880	AUG	1950	XXXXX.XXXXXXXXXXXXXXXXXXX.XXXXXXX
3880	SEPT	1950	XXXX.XXXXXXXXXXXXXXXXXXXXXXXXXXX...

STAIN MO. YR. X = GOOD DAY . = BAD DAY

3880	OCT	1950	..XXXXXXXXXXXXX.XX.....XXXXXXXXXX
3880	APR	1951	.XXXXXXXX..XXX..XX.....XXXXXXXX..
3880	MAY	1951	..XXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX
3880	JUNF	1951	XX.....XXXXXXXXXXXXX.XX...X.XXXX
3880	JULY	1951	XXXXXXXXX..XXXXXXXXXXXXXXXXXXXXXXXXXX
3880	AUG	1951	XXXXXXXXX.X..X.XXXXXXXXXXXXXX.....
3880	SEPT	1951	...XXXXXX.XXXXXXXXXXX.X.....XXX
3880	OCT	1951	XXXXXXXXXXXXX.XX.....X.....
3880	APR	1952	.XXXX..XX.XXXXXXXXXX.XXXXXXXXXXXXXX
3880	MAY	1952	XXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX
3880	JUNE	1952	XXXXXXXXXXXXX..X.XXXXXXXXX.XXXX..XX
3880	JULY	1952	XXXXXXXXXXXXXXXXXXXXX..X...XXXXXXXXXX
3880	AUG	1952	XXXXX..X..XXXXXXXXXXXXXXXXXXXXX...
3880	SEPT	1952	XXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXX
3880	OCT	1952	XXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX
3880	APR	1953	.XXXX.....XXXX..XX.....
3880	MAY	1953	XXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX
3880	JUNE	1953	...XXX..XXX.XXXXXX..XX..XXXXXX
3880	JULY	1953	XXXXXXXXXXXXXXXXXXXXX.XXXX..XXXXX
3880	AUG	1953	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXX
3880	SEPT	1953	..XXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
3880	OCT	1953	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
3880	APR	1954	X..X.XXXXXXX....X.....
3880	MAY	1954	..XXXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXX
3880	JUNE	1954	.XXXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX..XX
3880	JULY	1954	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXX..XX
3880	AUG	1954	XXX..XXXXXXXXXX.XXXX.XXXX.X.XXXXX
3880	SEPT	1954	XXX..XXXXXXXXXX...X.XXXXXXX....
3880	OCT	1954	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	APR	1955	X...XXXXXXXXXX.XXX..XXXXXX..XX
3880	MAY	1955	...XXXXX.XXXX....XXXXX..XX.XXXX
3880	JUNE	1955	XXXXXXXXXXXXXXXXXXXXX.XXX..X
3880	JULY	1955	..XXXXX..X..XXXXXXXXXXXXXXXXXXXXX
3880	AUG	1955	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
3880	SEPT	1955	XXXXXXXXXX.XXXXXXXXXXX....XXXXXX
3880	OCT	1955	XXXXX..XXXXXXXXXXXXXXXXXXXXX..
3880	APR	1956	..X...XXXXXXXXXXXXXXXXX..X.....
3880	MAY	1956	XXXXX..XXXXXXXXXXXXXXXXXXXXX
3880	JUNE	1956	XXX.XXXXXXXXXX..XXXXXXXXXXXXXXXXX.
3880	JULY	1956	X..X.XXXX..XX.X.XXXXXXXXXXXXXXXXXX
3880	AUG	1956	..XXXXXX..XXXXXXXXXXXXXXXXXXXXX.X.XX
3880	SEPT	1956	XXXXXXXXXXXXXXXXXXXXX.XXXX..XX
3880	OCT	1956	XXXXXXXXXXXXXXXXXXXXX.XXXX.....
3880	APR	1957	.XXX.....XXXXXXXXXXXXX..XXXXX
3880	MAY	1957	XXXXXXXXXXXXX.XXXXXX.XXXXXXXXXXXXXX
3880	JUNE	1957	X.XX.XX..XXX.XXXXXX..XXXXXXX.X
3880	JULY	1957	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
3880	AUG	1957	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
3880	SEPT	1957	XX.XXXXXXX.XXXXXX..XXXXXXXXXXXXX
3880	OCT	1957	XX.....XXXXXXXXXX.....XX
3880	APR	1958	..X...XX.XXXXXXXXXXXXXX.....X.XXX

STA'N MO. YR. X = GOOD DAY . = BAD DAY

3880	MAY	1958	XXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXX..
3880	JUNE	1958	.XXXXXXXXX.XXX.XX..X.XXXXXX.XXX
3880	JULY	1958	XXXXXXXXXXXXX..XXXXXXXXXX.XXXX..XXX
3880	AUG	1958	XXXXXXXXXXXXX.XXXXXXXXXXX.XXXXXX.XXX
3880	SEPT	1958	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXX
3880	OCT	1958	XXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXX
3880	APR	1959	..XXX..XXXXX....XXXXX..XXXXXX
3880	MAY	1959	XXXXX.XXXXXXXXXX.XX.XX....X.XX
3880	JUNE	1959	XXXXXXXXXXXXXXXXXXXXX.XXX.XXXX..XXX
3880	JULY	1959	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXX.XXX
3880	AUG	1959	XXXXXXXXXXXXXX.XX.XXX..XXXXXXXXXXXXX.
3880	SEPT	1959	XXXXXXXXX.XXXXXXX..XXXXXXXXXXXXXXXXX
3880	OCT	1959	XXXXX.....XXXXXXXXXXXXXXXXXXXXX..XX
3880	APR	1960	.XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.....XX
3880	MAY	1960	..XXXXXXXXXXXXXXXXXXXXX..XXXXX..XXXXXX
3880	JUNE	1960	XXXXXXXXXXXXXXXXXXXXX..XXXXXX..XXXXXXXXX
3880	JULY	1960	XX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	AUG	1960	.X.XXX.XXXXXXXXXXXXXXXXXX.XXXXXXXXXX
3880	SEPT	1960	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	OCT	1960	XXXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX..XX
3880	APR	1961	XX...XXX.XXX..XXX...XXXXXX..XX
3880	MAY	1961	XXXXX..XX.XXXX..XXXXXXXXXXXXXXXXXXXXX
3880	JUNE	1961	XXXXXXXXXXXXXX.XXX.X.XXXXXXXXXXXXXXX
3880	JULY	1961	XXXXXX.XXXXXXXXXX.XXXXXX..XXX...X
3880	AUG	1961	XXXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXX
3880	SEPT	1961	.XXXXXXXXXX..XXXXXX.X....XX....X
3880	OCT	1961	XXXXXX..XX.XXXX..X.....XX....
3880	APR	1962	XXXXXX.X...XXXXXXXXXXXXXXXXXXXXXXXXX
3880	MAY	1962	XXXXXX.XXXXXX..XXXXX..XXXXXXXXXXXXX.X
3880	JUNE	1962	XXXXXXXXXXXXXXXXXX..XXXXX..XXXXXXXXXX
3880	JULY	1962	XXXXX.XXXX.XXXXXX.XXXXXXXXXXX..XX.
3880	AUG	1962	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXX
3880	SEPT	1962	X.XXXX..XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	OCT	1962	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	APR	1963	..XXXXX..XXXXXXXXXX..XX..XXXXXXXXXX
3880	MAY	1963	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	JUNE	1963	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXX..
3880	JULY	1963	XX.XXXXXX..XX.XXXXXXXXXXXXXXXXXXXXXX
3880	AUG	1963	.XXXXXXXXXX.XXXXXXXXXXXXXXXXXX..X.XXXX
3880	SEPT	1963	XXXXXXXXXXXXX.XXX..XXXXXXXXXXXXXXXXXX
3880	OCT	1963	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	APR	1964	X.XX...XXX.XXX..XX.....XXXXX.
3880	MAY	1964	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	JUNE	1964	XXXXXXXXX.XXX.X.X..X..XXXXXXXXXXXXX
3880	JULY	1964	X.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	AUG	1964	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	SEPT	1964	...XXX....XXXXXXXXXX.XXXXXX..XXXX
3880	OCT	1964	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXX
3880	APR	1965	...XXXXXX..XX.....X.XXXXXXXXXXX
3880	MAY	1965	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XX...XXXXXX
3880	JUNE	1965	XXXXXX.XXXXXX.....XXXXXX..XXXX

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3880	JULY	1965	XXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	AUG	1965	XXXX.XXXXXXXXXXXXXXXXXXXXXXX.X.X.X.X
3880	SEPT	1965	XX.XXXXXXXXX.XXXXXXXXXXXXXXX.XX.XX
3880	OCT	1965	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3880	APR	1966	XXXXXXXX.XXXXXXXXXX.XXXXXX.XXXXXX
3880	MAY	1966	XXXXXXXXXX.X.XXXXXXXXXX.XXXXXXXXXX.
3880	JUNE	1966	.X.XXX.XXXXXXXXXXXXXX.XXXXXX
3880	JULY	1966	.XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXX
3880	AUG	1966	XX.XXXXXXXXXXXXXXXXXX.XXXXXXXXXX.X
3880	SEPT	1966	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXX
3880	OCT	1966	.XXXXXXXXXX.XXXXXXXXXXXXXX.XXX
3890	APR	1922	XX.XXXXXXXXXXXXXXXXXXXXXX.XX.XX
3890	MAY	1922	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XX
3890	JUNE	1922	XXX.X.XXXXXX.XXXXXXXXXXXXXX.XX.X
3890	JULY	1922	XX.XXX.XXXXXX.XXXXXXXXXXXXXX.XXXXXX
3890	AUG	1922	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3890	SEPT	1922	XXXXXX.XXX.XXXXXXXXXXXXXXXXXXXXX
3890	OCT	1922	XX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3890	APR	1923	.XXXXXXXXXX.XXXXXXXXXXXXXXXXXXXXX.
3890	MAY	1923	XXXXX.XXXXX.X.X.XXXXXXXXXXXXXX.
3890	JUNE	1923	.X.XXXXXX.XXXXXX.X.XXXXXXXXXX
3890	JULY	1923	X.XXX.X.X.XXX.XXXXXXXXXXXXXXXXXX.
3890	AUG	1923	XXXXXXXX.X.XXX.XXXXXXXXXXXXXX.XXXXXX
3890	SEPT	1923	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3890	OCT	1923	XXXXXXXXX.XXXXXXXXXXXXXXXXXXXXX.XXXXXX
3890	APR	1924	.XX.XX.XXXXXXXXXXXXXXXXXXXXX.XX
3890	MAY	1924	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXX
3890	JUNE	1924	XX.X.XXXXXX.XXXXXX.XXXXXXXXXX
3890	JULY	1924	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXX
3890	AUG	1924	X.XX.XXXXXX.XXX.XXXXXXXXXXXXXX
3890	SEPT	1924	XXXX.XXXXXXXXXXXXXX.XXXXXXXXXX
3890	OCT	1924	XX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3890	APR	1925	X.XXXXXXXXXXXXXXXXXX.X.X.XXXXXX
3890	MAY	1925	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXX
3890	JUNE	1925	X.XXXXXX.XXXXXX.XXXXXX.XXXXXX
3890	JULY	1925	XXXXXX.XXXXXXXXXXXXXXXXXXXXXX.XXXXXX
3890	AUG	1925	XXXXXXXXXXXXXXXXX.XXXXXX.XXXXXX
3890	SEPT	1925	XXXX.XX.X.X.XXXXXX.XXXXXX
3890	OCT	1925	.XXXXXXXXX.XXXXXX.XXX
3890	APR	1926	.XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3890	MAY	1926	XXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXXXXX
3890	JUNE	1926	XXXXXXXXXXXXXXXXXXXXX.XXX.XXXXXX
3890	JULY	1926	XX.XXX.XXXXXXXXXXXXXXXXXXXXXX
3890	AUG	1926	XXXXXXXXX.XXXXXX.X.XXXXXXXXXX.
3890	SEPT	1926	.X.XX.XXXXXX.X.XXXXXX.XXXXXX
3890	OCT	1926	XX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3890	APR	1927	.XXXXX.XXXXXX.XXXXXXXXXXXXXX
3890	MAY	1927	XX.X.XXXXXX.XXXXXX.XXXXXX.X
3890	JUNE	1927	XXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXX
3890	JULY	1927	XX.XXXXXX.XXXXXX.XXXXXXXXXXXXXX
3890	AUG	1927	XXXXXXXXXXXXXXXXXXXXX.XX.XXXXXX.XX

STATION	MO.	YR.	X = GOOD DAY	. = BAD DAY
3890	SEPT	1927	XXXXXXXX..X.XX...	XXXXXXXXXXXXXXXXXX...
3890	OCT	1927	..X...XXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX
3890	APR	1928	.X.....X.....	XXXXXXXXXXXXXX
3890	MAY	1928	XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX
3890	JUNE	1928	XX.XX...XX.XXX...	X...XXXXX.
3890	JULY	1928	..XXX..XXXXX..X...	XXXXXXXXX.XXXX
3890	AUG	1928	XXXXXXXXXXXXXXXXXXXXX	.X...XXXX
3890	SEPT	1928	XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX
3890	OCT	1928	XXXXXXXXXXXX..XX..	XXXXXXXXXXXXXXXXX.
3890	APR	1929	..XX.....XXXXXXX	...XXXX..
3890	MAY	1929	.X..XXXX.XXX...	XXXXXXXXXXXXXXXXXXXXXX
3890	JUNE	1929	..XXXXXXXX..XXXXX	XXXXXXXXXXXXXXXXXXXXXX
3890	JULY	1929	XXXXXX.XXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX
3890	AUG	1929	XX.XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX
3890	SEPT	1929	X..XXXXX..XXXXX	XXXXXXXXXXXXXXXXXXXXXX
3890	OCT	1929	XXXXXXXXXXXX..XXXXXX	..XXXXXXXXXX....
3890	APR	1930	..XXXXXXXXXXXXXX	..XXXXXXXXX..X....
3890	MAY	1930	XXX.XXXX..X.XXXXXX	XXXXXXXXXXXXXX.XX
3890	JUNE	1930	XXXXXXXXXXXXXXXXXXXXX	..XXXX.XXX
3890	JULY	1930	..XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXX
3890	AUG	1930	XXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXX.X
3890	SEPT	1930	XXXXXXXXXXXX..XXXXXX	XXXXX...XXXX
3890	OCT	1930	XXXXXXXXX.....XXXXXX	..XXXXXXXXXXXXXX
3890	APR	1931	..XXXXXXXXXXXXXXXXXX	X.X..XXXXXXX
3890	MAY	1931	XXX..X..XXXXXXXXXX	.X.XXXXXXXXXXX
3890	JUNE	1931	XX.XXXXXX..XXXXXXX	XXXXXXXXXXXXXXXXXXXXX
3890	JULY	1931	XX.X.XXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXX
3890	AUG	1931	XXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXX
3890	SEPT	1931	XXXXXXXXXX..XX.XXXXXX	...XXXXXXX
3890	OCT	1931	XXXXXX..XXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXX
3890	APR	1932	..XXXXXXXXXXXXXXXXXX	X.X
3890	MAY	1932	XXXXXXXXXXXXXXXXXXXXX	..X..XX.X.
3890	JUNE	1932	.X.XXXX.XXXXXXX	XXXXXXXXXXXXXXXXXXXXX
3890	JULY	1932	XXX.XXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXX
3890	AUG	1932	XXXXXXXXXXXX..XXXXXX	..XX...XXXXX..X
3890	SEPT	1932	..XXXXXXXXXXXXXXXXXX	...XXXXXXXXXX
3890	OCT	1932	X.XXX.....XXXXX	..XXXXXXXXXX.X...
3890	APR	1933	X.....XXX	..XXXXXXXXXX....
3890	MAY	1933	XXXXXXXXX..XXXXXX	..XX.XXXX.XXXXXX
3890	JUNE	1933	XXXXXXXXXXXXXXXXXXXXX	XXXXXX.XX
3890	JULY	1933	XXXXXXXXXX.XXXXXXXX	XXXXXXXXXXXXX.X
3890	AUG	1933	XXXXXXXXXXXXXXXXXXXXX	XXX.XXXXX...
3890	SEPT	1933	..XXXXXXXXXXXXXXXXXX	XXXXX...XXXXX
3890	OCT	1933	XXXXXXXXXXXXXXXXXXXXX	XXXXX...
3890	APR	1934	..XXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXX
3890	MAY	1934	XXXXXXXXXXXXX.XXXXXX	XXXXXX
3890	JUNE	1934	.X..X..XXXXXXX	XXXXXXXXXXXXX.XXXX
3890	JULY	1934	XXXXX.XXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXX
3890	AUG	1934	XXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXX.X
3890	SEPT	1934	XXXXXX..XXXXX.XXXX	XXXXX
3890	OCT	1934	XXXXXXXXXXXXX..X...	XXXXXXXXXX...XXXXX

STA'N MO. YR. X = GOOD DAY . = BAD DAY

3890	APR	1935	XX.....XXXXXX.X.....XX
3890	MAY	1935	X.XXX..XX...XXXXXXXXXX..XXXXXXXX
3890	JUNE	1935	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3890	JULY	1935	XXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXX
3890	AUG	1935	XXXXXXXXXXXXXXXXXX.X.XXXXXXXXXXXXXXX
3890	SEPT	1935	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3890	OCT	1935	XXXXXXXX.XXXXXXXXXXX.....XXX.....
3890	APR	1936	XXXXXXXXXXXXXXXX.X...X..XXX
3890	MAY	1936	XXXXX.XXXXXXXXXXXXXX..X.XXXXXXXXXXX
3890	JUNE	1936	XXXXX...XXXXXXXXXXXXXXXXXXXXXX.XXXXX
3890	JULY	1936	XXXXXXXXXX.XXX.XXXXXXXXXXXXXXXXXXX
3890	AUG	1936	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.X..XXXXX
3890	SEPT	1936	XXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3890	OCT	1936	XXXXXXXXXXXXXXXXXXXXXXXXXX.....XXXXXXX.
3890	APR	1937	...XXXXXXXXXXXXXXXXXXXXX..XXXXXXX
3890	MAY	1937	XXXXXXXXXXXXXXXXXX..XXXXX..XXXXX..XX
3890	JUNE	1937	XXXXXXXXXX.X.XXXXXXXXXXXXXXXXXXXXX
3890	JULY	1937	XXXXXXXXXXXXX.X...XXXXXXXXXXXXXXXXX.
3890	AUG	1937	.XXXXX.XXXXXXXXXXXXXX.XXXXXXXXXXXXXX
3890	SEPT	1937	XXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXX...
3890	OCT	1937	XX...XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	APR	1922	XXX.XX...X.XX...XXXX..XXXXXX
4480	MAY	1922	XXXXX.X.XXXXXX..XXXXXXXXXXXXXXXXXX
4480	JUNE	1922	XXXXX.XXXXXXXXXXXXXXXXXX.XXXXXXX.XX
4480	JULY	1922	XXXXXXXXXX.XXXXXXXXXXXXXXXXXX.XXXXXX
4480	AUG	1922	XXXXXXXXXXXXXXXXXX.XXX.XXXXXXXXXXXXX
4480	SEPT	1922	XXXXXXXXX.X..XXXXXXXXXXXXXXXXXXXXXX
4480	OCT	1922	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	APR	1923	XXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	MAY	1923	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.
4480	JUNE	1923	.XXX.XXXXXXXXXX.X..X.X..XXXXXXXXXX
4480	JULY	1923	XXXXXXXXXX.X.XXXXX..XXX.XXXXXXXXXXX
4480	AUG	1923	XXXXXXXXXX..XXXXXXXXXXXXXXXXXXXXXXXX
4480	SEPT	1923	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	OCT	1923	XXXXXXXXX.XXXXXXXXXXXXXXXXXX.....
4480	APR	1924	.XXXXXXXXXX...XXXXXXXXXXXXXXXXXXXX
4480	MAY	1924	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	JUNE	1924	XXXXXXXXXXXXXXXXXXXX.XXXXXX.XXXXXX.XX
4480	JULY	1924	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	AUG	1924	XX..XXX.XXXXXX.XXXXXXXXXXXXXXXXXXX
4480	SEPT	1924	XXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXX.XXXX
4480	OCT	1924	XX..XXXXXXXXX..XXXXXXXXXXXXXXXXXX...
4480	APR	1925	..XXXXXXXXXXXXXXXXXXXXX.XXX...XXXXX
4480	MAY	1925	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.
4480	JUNE	1925	XXXXXXXXX.X.XX..XXXXXXXXX.XXXXXXXX
4480	JULY	1925	XXXXXXX.XXXXXXXXXXXXXXXXXXXXXX...XXX
4480	AUG	1925	XXXXXXXXXXXXXXXXXXXX.XXXXXXX.XXXXXXX
4480	SEPT	1925	XXXXX..XX..XXXXX.....XXXXXX.....
4480	OCT	1925	...X...XX..XXXXXXXXXXXXXXXXXX...XX
4480	APR	1926	XXXXX.XXXXXXXXXXXXXXXXXXXXX
4480	MAY	1926	XXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXXXXX.XXXX

STA'N MO. YR. X = GOOD DAY . = BAD DAY

4480	JUNE	1926	XXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXX
4480	JULY	1926	..XXXXXXXXXXXXXXXXXXXXX
4480	AUG	1926	XXXXXXXXXXXXXXXXXXXXX..X.X.XXXXXXXXXX..
4480	SEPT	1926	XX.XX.XXX..XXXXXXXXXX.....XXXXX
4480	OCT	1926	XXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXXX
4480	APR	1927	..XXXXXX.....XXX.....XXXXXXXXXXXXX
4480	MAY	1927	XXX.X...XXXXXXXXXXXXX.....XXXX..XX
4480	JUNE	1927	XXXXXXXXXX.XXX.XXXXXXXXXXXXXXXXXX..
4480	JULY	1927	XXX..XXXXXXXXXXXXX..XXX.XXXXXXXXXXXXXX
4480	AUG	1927	XXXXXXXXXX.XXXX..XXX..XXXXXXXXXXXXX
4480	SEPT	1927	X.XXXX.XX.XX..XXXXXXXXXXXXXXXXXXXXX
4480	OCT	1927	XXXXXXXXXXXXX..XX.XXXXXXXXXXXXXXXXXXX.
4480	APR	1928	.X..X..XX...X.XX...XXXXXXXXXXXXX
4480	MAY	1928	XXXXXXXXXXXXXXXXXXXXX
4480	JUNE	1928	XXX.XX.XXXXXXXXXX..X.XX.XXXXXXXXXX.
4480	JULY	1928	..XXX.XXXXXXXXXXXXXX..XXXXXXXXXXXXX
4480	AUG	1928	XXXXXXXXXXXXXXXXXXXXX
4480	SEPT	1928	XXXXXXXXXXXXXXXXXXXXX
4480	OCT	1928	XXXXXXXXXXXXX.....XXXXXXXXXXXXXXXXXXXXX
4480	APR	1929	.XXX.....XXXX.XXXX.X.XXXXXX..
4480	MAY	1929	X.XXXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXXX
4480	JUNE	1929	XX.XXXXXX.XXX.X.X.XXXXXXXXXX.XXXX
4480	JULY	1929	XXXX..XXXXXXXXXXXXXXXXXXXXX
4480	AUG	1929	XXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXX
4480	SEPT	1929	XXXXXXXXXXXXXXXXXXXXX..XXXXX
4480	OCT	1929	XXXXXXXXXXXXXXXXXXXXX
4480	APR	1930	XXXXXXXXXXXXXXXXXX.XXXXXXXXXXX.X...X
4480	MAY	1930	XXX.XXXX..XXXXXXXXXXXXXXXXXXXXX
4480	JUNE	1930	XX..XXXXXXXXXX..XXXXX.XXXXXXX.XX
4480	JULY	1930	XXXXXXXXXXXXXXXXXXXXX.XXXX.XXXXXX
4480	AUG	1930	XXXXXXXXXXXXXXXXXXXXX.XXX..XXXXXXXXXXXXX
4480	SEPT	1930	XXXXXXXXXX..X.XXXXXXXXXXX..XXXXX
4480	OCT	1930	XXXXXXXXX.....X.....XXXX.XXXX
4480	APR	1931	..XXXXXXXXXXXXXXXXXXXXX.....XXXXXXX
4480	MAY	1931	XXXXXX.XXXXXXXXXXX.XXXXXXXXXXXXXX
4480	JUNE	1931	XX.XXXX..XXXXXXXXXX.XXXXXXXXXXXXXX.
4480	JULY	1931	XXXX.XXXXXXXXXXX.XXXXXXXXXXXXXX.
4480	AUG	1931	XXXXXXXXXXXXXXXXXXXXX
4480	SEPT	1931	XXXXXXXXX.XX...XXXXXX.....XXXXXX
4480	OCT	1931	XXXXXXXXXXXXXXXXXXXXX
4480	APR	1932	..XXXXXXXXXXXXXXXXXXXXX.....X.XX
4480	MAY	1932	XXXXXXXXXXXXXXXXXX.XXXX.X..XXXXXXX.
4480	JUNE	1932	.XXXXXXXXX.X.XXXXXXXXXXXXXXXXXXXXXX
4480	JULY	1932	XX..XXXXXXXXXX.XXXXXXXXXXXXXXXXXXX
4480	AUG	1932	XXXXXXXXXXXXX.XXXXXXXX..X..XXXXXXX
4480	SEPT	1932	XXXXXXXXX..XX.XXXXXX..XXXX.XXXXX
4480	OCT	1932	XXXXX.....XXX..XXXXXXXXXX.....
4480	APR	1933	.X...X.....XXXX.XXXXXXXXXXXXXX..
4480	MAY	1933	XX.XX..XXXXXXXXXX..XX..XXXXXXXXXXXXX
4480	JUNE	1933	XXXXXXXXXXXXXXXXXXXXX.XX.XXX.XX..X
4480	JULY	1933	XXXXXXXXXXXXXXXXXXXXX

STA'N MO. YR. X = GOOD DAY . = BAD DAY

4480	AUG	1933	XXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXXX
4480	SEPT	1933	XXXXXXXXXX.XXXXXXXXXXXXXX...XXXX
4480	OCT	1933	XXXXXXXXXXXXXXXXXXXXX.....
4480	APR	1934	..XXXXXXXXXXXXX.XXXXXXXXXXXXXXX.
4480	MAY	1934	XXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXX
4480	JUNE	1934	.X..XX.XXXXXXXXXXXXXX.XX..XXXX
4480	JULY	1934	X.X.XXXXXXXXXXXXXXXXXXXXXX
4480	AUG	1934	XXXXXXXXXXXXX.XXXXXXXXXXXXXX.X
4480	SEPT	1934	XXXXXXXXX.XXXXXXXXXXXXXX.....XX
4480	OCT	1934	XXXXXXXXXXXXXXXXXXXXX.XXXXXXX..XXXXX
4480	APR	1935	XX.....XXXXX..XXXXXX.
4480	MAY	1935	XXXXX...X.X..XXXXXXXXXXXXX..XXXXXX
4480	JUNE	1935	.XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXX
4480	JULY	1935	XXXXX.XXXXXXXXXXXXXX.XXXXXXXXXXXXXX
4480	AUG	1935	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	SEPT	1935	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	OCT	1935	XXXXXXXXX..XXXXXXXXXXXXX.....XXXX....
4480	APR	1936	XXXXXXXXXXXXX.X...X..XXX
4480	MAY	1936	XXXXXXXXXXXXXXXXXXXXX.XXX..XXXXXXXXXXXXX
4480	JUNE	1936	XXXXX..XXXXXXXXXXXXXXXXXXXXX
4480	JULY	1936	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	AUG	1936	XXXXXXXXXXXXXXXXXXXXX.XXXXXX.XXXXXXX
4480	SEPT	1936	XXX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	OCT	1936	XXX.XXXXXXXXXXXXXXXXXXXXXX...X..XXXXX.
4480	APR	1937	..XXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXX
4480	MAY	1937	XXXXXXXXXXXXXXXXXXXXX...XXXXXX.XXXX.XXX
4480	JUNE	1937	XXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX
4480	JULY	1937	XXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX.
4480	AUG	1937	.XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
4480	SEPT	1937	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXX....
4480	OCT	1937	X.....XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	APR	1938	XXXXXXXXXXXXXXXXXXXXX.X..XXXX
4480	MAY	1938	..X....XXXXXXXXXXXXX.XXXXXXXXXXXXXX
4480	JUNE	1938	XXXXXXXXXXXXXXXXXXXXX.XX..XX..XXX
4480	JULY	1938	.XXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXX
4480	AUG	1938	XXXXX.X.XXXXXX.XXX.XXXXXXXXXXXXXX
4480	SEPT	1938	XXXXX.....XXXXXXXXXXXXXXXXXXXXX
4480	OCT	1938	XX.....XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	APR	1939	XX..XX..XXXXXXXXXXXXXXXXXXXXX
4480	MAY	1939	XXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXX
4480	JUNE	1939	XXXXX..XXXXXX.X....X.XX..XXXXX
4480	JULY	1939	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
4480	AUG	1939	XXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXX
4480	SEPT	1939	XXXXXX.X.XXX..XXXXXXXXXXXXXXXXXXXXX..X
4480	OCT	1939	XXXXXXXXXXXXX.XXXXXXXXXXX.....
4480	APR	1940	XX..XXXXX..X..X.XXX
4480	MAY	1940	XXXXXXXXXXXXXXXXXXXXX.X.X
4480	JUNE	1940	X.XXXXXX.XXXXXXXXXXXXXX..XXXXXXXXXX
4480	JULY	1940	XXXXX.XXXXXXXXXXXXXX.X.XXXX.X.XXXX
4480	AUG	1940	XXXXXXXXXXXXXXXXXXXXX.XXXX
4480	SEPT	1940	XX..XXXXXXXXXXXXXXXXXXXXX..XXXXXXX

TABLE 1. - SUMMARY OF DATA FOR THE YEAR 1964

STATE	POPULATION	PERCENTAGE	PERCENTAGE
ALABAMA	2,049,450	100.0	100.0
ALASKA	191,330	9.3	9.3
ARIZONA	1,293,000	62.9	62.9
ARKANSAS	1,192,000	58.2	58.2
CALIFORNIA	15,717,000	766.8	766.8
COLORADO	2,421,000	118.1	118.1
CONNECTICUT	2,049,000	100.0	100.0
DELAWARE	248,000	12.1	12.1
FLORIDA	1,900,000	92.7	92.7
GEORGIA	2,421,000	118.1	118.1
IDAHO	248,000	12.1	12.1
ILLINOIS	11,920,000	582.0	582.0
INDIANA	4,421,000	215.7	215.7
IOWA	2,421,000	118.1	118.1
KANSAS	2,421,000	118.1	118.1
KENTUCKY	2,421,000	118.1	118.1
Louisiana	2,421,000	118.1	118.1
Maine	248,000	12.1	12.1
Maryland	2,421,000	118.1	118.1
Massachusetts	2,421,000	118.1	118.1
Michigan	7,421,000	361.7	361.7
Minnesota	2,421,000	118.1	118.1
Mississippi	2,421,000	118.1	118.1
Missouri	2,421,000	118.1	118.1
Montana	248,000	12.1	12.1
Nebraska	2,421,000	118.1	118.1
Nevada	248,000	12.1	12.1
New Hampshire	248,000	12.1	12.1
New Jersey	7,421,000	361.7	361.7
New Mexico	248,000	12.1	12.1
New York	19,421,000	947.8	947.8
North Carolina	4,421,000	215.7	215.7
North Dakota	248,000	12.1	12.1
Ohio	11,421,000	557.2	557.2
Oklahoma	2,421,000	118.1	118.1
Oregon	248,000	12.1	12.1
Pennsylvania	11,421,000	557.2	557.2
Rhode Island	248,000	12.1	12.1
South Carolina	2,421,000	118.1	118.1
South Dakota	248,000	12.1	12.1
Tennessee	2,421,000	118.1	118.1
Texas	11,421,000	557.2	557.2
Utah	248,000	12.1	12.1
Vermont	248,000	12.1	12.1
Virginia	4,421,000	215.7	215.7
Washington	248,000	12.1	12.1
West Virginia	248,000	12.1	12.1
Wisconsin	4,421,000	215.7	215.7
Wyoming	248,000	12.1	12.1

STATION	MO.	YR.	X = GOOD DAY . = BAD DAY
4480	OCT	1940	...XXXXXXXXXXXXXXXXXXXXXXXXX.....
4480	APR	1941	.XXXXXXXXXX.X.XX..XXXXXXXXXXXXXXXX
4480	MAY	1941	XXXXXXXXXXXXX..XXXXXXXXXXXXX..XXXX
4480	JUNE	1941	.XXXXXXXXXXXXX..XXXXXXXXXXXXX..X
4480	JULY	1941	XXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXXXXX
4480	AUG	1941	XXXXX.XXXXXXXXXXXXXXXXXXXXXX.XX.XXXX
4480	SEPT	1941	X.X.XXXXX..XX.XXXXXX.....XX
4480	OCT	1941	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	APR	1942	.XX...X..XXXX..XXXXXXXXXXXXXXXXXXXX
4480	MAY	1942	XXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXX..XXXX.
4480	JUNE	1942	XX...XXXXX.XXX..X.XXXXXX.X..XX
4480	JULY	1942	XXXXXXXXXXXXX.XXXX.XXXXXX.X..XXXX.
4480	AUG	1942	XXXXX.XXXXXX..XXXXXXXXXX.XX.XXXXXX..
4480	SEPT	1942	XXXXXXXXXXXXXXXXXXXXX...XXXXXXXXXXXXX
4480	OCT	1942	XXXXXXXXXXXXXXX.XXXXXXXXXXX...X.....
4480	APR	1943	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	MAY	1943	XXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXX
4480	JUNE	1943	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.
4480	JULY	1943	XXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXXXXX
4480	AUG	1943	XXXXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	SEPT	1943	.XX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	OCT	1943	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXX..
4480	APR	1944	.XXXXX..XXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	MAY	1944	XXXXXXXXXXXXX.XX.X..XX.XXXXXXXXXX..
4480	JUNE	1944	XX..XXXXXXXXX..XXXXXXXXXXXXXXXXX.XXXX
4480	JULY	1944	XXX.X.X..XXXXXXXXXXXXXXXXXXXXX.XXXXXX
4480	AUG	1944	XXXXXXXXX.XXXXXX.XXXXXXXX..XX.XXX
4480	SEPT	1944	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..
4480	OCT	1944	.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	APR	1945	...XX.....XXXXXX.XXXXXXX.X..XX
4480	MAY	1945	XXXXX.XXXXXXXXXXXXXX..X...XXXXXXXXXX
4480	JUNE	1945	XXXXXXXXXX.XXXXXX.XXXXXXXXXXXXXX..XX
4480	JULY	1945	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
4480	AUG	1945	XXXXXXXXX.X..XXXXXXXXXXXXXXXXXXXXX.XXXXX
4480	SEPT	1945	XXXXXXXXX.XX.XXXXX.....XXX
4480	OCT	1945	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXX.XXX..
4480	APR	1946	X...X..XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.
4480	MAY	1946	XXXXXXXXXXXXXXXXXXXXX.X.XXXXXXXXXXXXXX.XX
4480	JUNE	1946	XXXXX...XXXXXXXXXXXXXXXXXXXXX..XXXXXXX
4480	JULY	1946	XX.XXXX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.
4480	AUG	1946	XXXXX...XXXXX..X.XXXXXXX.XXXXXXX
4480	SEPT	1946	XXX.....XXXXXXXXXXXXXXXXX..XX..XXXX
4480	OCT	1946	...XXXXX.....XXXXXXXXXX.....
4480	APR	1947	XXXXXXXXXX.XXXXXX.....XXXXX.X
4480	MAY	1947	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXX
4480	JUNE	1947	.X..XXXXXXXXXX.XXX.XXXXXX...X.XXX
4480	JULY	1947	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	AUG	1947	XXX..X.XXXXXXXXXXXXXXXXXXXXXX..XXXXXX.X
4480	SEPT	1947	XXXXXXXXXXXXX.XX.....XXXXXXXXXXXX
4480	OCT	1947	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXX
4480	APR	1948	X.....XXXXXXXXXXXXXXXXX.XXXX

STATION MO. YR. X = GOOD DAY . = BAD DAY

4480	MAY	1948	XXXXXXXXX.XXXXXXXXXXXXXXXXXX..XXXXXXXXXX
4480	JUNE	1948	XXXXXXXXX..XXXXXXXXXXXXXXXXX.XXXXXXXX
4480	JULY	1948	XXXXXXXXXXXX.XXXX.XXX.XXXXXX..XXX
4480	AUG	1948	XXXXXXXXXXXX.X.XXXXXXXXXXXXXXXXXXXXXXX
4480	SEPT	1948	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXX
4480	OCT	1948	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	APR	1949	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.X
4480	MAY	1949	XXXXXXXXXXXXXXXXXXXX..XXX..X.XXXXX.X
4480	JUNE	1949	XXXXXXXXXXXXXXXXXX..XXXXXXXXXX.XXXX
4480	JULY	1949	XXXXXXXXXXXXX.XXXXXX..XXXXXXXXXXXXX
4480	AUG	1949	XXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXXX
4480	SEPT	1949	X.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	OCT	1949	XXXXXXXXXX..XXXXX.....XXXXX
4480	APR	1950	X.....XXXXXXXXXXXXXXXXX.XXXXXXX
4480	MAY	1950	XXXXXXXXXXXXXXXXX.XXXXXXXXXX.XXXXXXXX
4480	JUNE	1950	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXX
4480	JULY	1950	XXXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXXX..X
4480	AUG	1950	XXXXX.X...XXXXXXXXXXXXXXXXXXXXX.XXXX
4480	SEPT	1950	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.
4480	OCT	1950	.XXX..XXXXXXXXX.XX.....XXXXXXXXX
4480	APR	1951	.XXXXXXXXXX.XXX..X.....XXXXXXXXXX
4480	MAY	1951	X.XXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXXX
4480	JUNE	1951	XXX..X.XXXXXXXXXX.XXX.X.X..X.XXXX
4480	JULY	1951	XXXXXXXXX..XXXXXXXXXXXXXXXXXXXXXXXXXX
4480	AUG	1951	XXXXXXXXX.XX...X.XXXXXXXXXX...X.....
4480	SEPT	1951	..XXXXXX.X.XXXXXXXXXXX.XX.....XXX
4480	OCT	1951	XXXXXXXXX.....
4480	APR	1952	.X.XXX..XXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	MAY	1952	X...XXXXXXXXXX.XXXXXXXXXXXXXXXXXXX.XX
4480	JUNE	1952	.XXXXX.XXX.XXXXXXXXXXX..XXX.X.X
4480	JULY	1952	XXXXXXXXXXXXX.XXXX.X...X.XXXXXXXXXXX
4480	AUG	1952	XXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXXXXX..
4480	SEPT	1952	XXXXXXXXXXXXX..XXXXX.XXXXXXXXXX.XXX
4480	OCT	1952	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXXXXX
4480	APR	1953	.XXXXX.X.....XXXXX..XXXXX..
4480	MAY	1953	..XXXXXXXXX..XXXXXXXXXX..XXXXX..X..X
4480	JUNE	1953	X..XXXXXXXXXX.XXXXXXXXXX.XXXXXX.XX
4480	JULY	1953	.XXXXXXXXXXXXX.XXXXXXXXXXXXXX.X.XXXX
4480	AUG	1953	XXXXXXXXXXXXX.XXXXXXXXXXXXXX.XXX.XXXXXX
4480	SEPT	1953	.XXXXXXXXXXXXXXXXXXXXX.XXX.XXXXXXX
4480	OCT	1953	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXXX
4480	APR	1954	X..X..XXXXXXXXXX.....
4480	MAY	1954	..XXXXXXXXX..XXXXXXXXXXXXXXXXXXXXXX
4480	JUNE	1954	.XXXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX.XX.X
4480	JULY	1954	.XXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXX.XX
4480	AUG	1954	XXXXXXXXXXXXXXXXXXXXX.XXXXXX..XXXXXX
4480	SEPT	1954	XXXXX.XXXXXX.XXX.....XXXXXXXXX...
4480	OCT	1954	X..XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXX
4480	APR	1955	X....XXXXXXXXXX.XXXXXXXXXXXXXX..XX
4480	MAY	1955	..XXXXXXXXXXXXX..XXX...XXXXXXXXXX
4480	JUNE	1955	XXXXXXXXXXXXXXXXX.X..XXXXXXXXXXXXX.X

STA'N MO. YR. X = GOOD DAY . = BAD DAY

4480	JULY	1955	.XX.X..XXX..XXXXX.XXXXXXXXXXXXXXXXXX
4480	AUG	1955	XX
4480	SEPT	1955	XXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXX
4480	OCT	1955	XX..
4480	APR	1956	..X...XXXXXXXXXXXXXXXXXXXXXXXXXXXX..
4480	MAY	1956	..XXXXXXXXXXXXXXXXXXXXXXXXXXXX.X.XXXXX
4480	JUNE	1956	XXXXXXXXXXXXXXXXX..XXXX.XXXXXXXXXX.
4480	JULY	1956	.X.X..XXXXXX.XXXXXXXXXXXXX..XXXXXX
4480	AUG	1956	..XXXXXXXXX.XXXXXXXXXXXXXXXXXXXXX.X.XX
4480	SEPT	1956	XXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXX...X
4480	OCT	1956	XXXXXXXXXXXXXXXXXXXXXXXXXXXX..XX.....
4480	APR	1957	..XX..X.....XX.XXXXXXXXXX.XXXXXX
4480	MAY	1957	XX
4480	JUNE	1957	XXXXXXXXXX.XX..XXXXXXXXXXXXXXXXXXXX
4480	JULY	1957	XXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXX
4480	AUG	1957	XXXXXXXXXX..XXXX.XXXXXXXXXXXXXXXXXX.
4480	SEPT	1957	XX..XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	OCT	1957	XX.....XXXXXXXXXXXXXXXX.....XX
4480	APR	1958	.XXX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	MAY	1958	XXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXX
4480	JUNE	1958	.XXXXXXXXX.XXXX.XXXXXXXXXXXXXXXXXXX
4480	JULY	1958	XXXXXXXXXXXXX..XXXXXXXXXX.XXXXXXXXXXX
4480	AUG	1958	XXXXXXXXXXXXX.XXXXXXX.XXXXXX..XXX
4480	SEPT	1958	XXXXXXXXXXXXXXXXX..XXX.XX..XXXXXX
4480	OCT	1958	XXXXXXXXX...XXXXXXXXXXXXXXXXXXXXXXXXXX
4480	APR	1959	..XXXXX..XXXXX.XXXXXXXXXXX..XXXXXX
4480	MAY	1959	XXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXX
4480	JUNE	1959	XXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXXXXX..XXX
4480	JULY	1959	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXX
4480	AUG	1959	XXXXXXXXXXXXXXXXXXXXX.XXX..XXXXXXXXXXXX
4480	SEPT	1959	XXXXXX..XXXXXX..XXXXXXXXXXXX...
4480	OCT	1959	.XXXXX.....XXXXXXXXXXXXXXXXXXXXXXXXXX
4480	APR	1960	.XXXXXXXXXXXXXXXXXXXXXXXXXXXX.....XXX
4480	MAY	1960	XXXXXXXXXXXXXXXXXX.XXXX.XXXX.X.XXXXXX
4480	JUNE	1960	XX.
4480	JULY	1960	.XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXX
4480	AUG	1960	.X..XXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXX
4480	SEPT	1960	XX
4480	OCT	1960	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX...
4480	APR	1961	XXXXXXXXXX..X...XXXXX.XXXX..XXX
4480	MAY	1961	X.XXX..XX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	JUNE	1961	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXX.X
4480	JULY	1961	XXXXXXXXXXXXXXXXXXXXX.XXXXXX.X.XX.XXX
4480	AUG	1961	XXXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	SEPT	1961	XX
4480	OCT	1961	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.....
4480	APR	1962	.XXXXX..X..XXXXXXXXXXXXXXXXXXXXXXXXXX
4480	MAY	1962	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXX.X
4480	JUNE	1962	XXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXXXX
4480	JULY	1962	XXXXXXXXXXXXXX..XX.XXXXXXXXXXX..XX
4480	AUG	1962	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

STA'N MO. YR. X = GOOD DAY . = BAD DAY

4480	SEPT	1962	X.XXXX..XX..XXXXXXXXXXXXXXXXXXXXX
4480	OCT	1962	XXXXXXXXXXXXX.X..XXXXX.....XXXXXX
4480	APR	1963	...XXX..XXXXXXXXX.XXX..XXXXXXXXXX
4480	MAY	1963	XXXXXXXXXX.X.XXXXXXXXXXXXXXXXXX..XXXX
4480	JUNE	1963	XXX.XX..XXXXXXXXXXXXXXXXX..XXXXX...
4480	JULY	1963	XXXXXXXXXX.XXX.XXXXXXXXXXX.XXXXXXX
4480	AUG	1963	.XXXXXXXXXX.XXXXXXXXXXXXXXXXXX.XXXXXXX
4480	SEPT	1963	XXXXXXXXXXXXXXXXX...XXXXXXXXXXXXXXXXX
4480	OCT	1963	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	APR	1964	XXXXX.XXXXXXXXXXX..XX..X.XX..XXX
4480	MAY	1964	XX.....XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	JUNE	1964	XXXXXXXXXXXXXXXXXX.XXX.XXXXXXXXXXX
4480	JULY	1964	X.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	AUG	1964	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XX.XX
4480	SEPT	1964	...XXX...XXXXXXXXXXXXXXXXXX..XXXX
4480	OCT	1964	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	APR	1965	X.XXX.XXX...XXX.XXXXXXXXXXX
4480	MAY	1965	XXXXXXXXXXXXXXXXXXXXX.XX.XX.XXXXXXX
4480	JUNE	1965	XX.XXXXXXXXXX.XXX..X.XXXXXX..XXX.
4480	JULY	1965	XXXXXX.X.XXXXXXXXXXXXXX.XXXXXXXXXXX
4480	AUG	1965	XXXXX.XXXXXXXXXXXXXXXXXXXXXX.XXX.X.X
4480	SEPT	1965	XX..XXXXXXXXXX.....X.XXXX..XX
4480	OCT	1965	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4480	APR	1966	X..XXX.X..XXXXX...XXXXX.....X
4480	MAY	1966	XXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXX.X
4480	JUNE	1966	.X...XXX...XXXXXXXXXXXXXXXXX..XXXXX
4480	JULY	1966	XX.XXXXXXXXXXX.XXXXXXXXXXX.XXXXXX
4480	AUG	1966	XXXXXX.XXXXXXXXXXXXXX..XXXXXXXXXXXXX
4480	SEPT	1966	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..
4480	OCT	1966	XXXXXXXXXXXXX.....XXXXXXXXXXXXXXXXX
560	APR	1922	...XX.....XXXXXXXXXXXXXXXXX
560	MAY	1922	XXXXXXXXX...XXXXXX..XXXXXXXXXXXXX
560	JUNE	1922	XXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
560	JULY	1922	XXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXXX
560	AUG	1922	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXXX
560	SEPT	1922	XX..XX..XXX...XXXXXXXXXXXXXXXXX...
560	OCT	1922	XXXXXXXXXXXXXXXXXXXXX.X.....
560	APR	1923	XX.XXXXXXX.XXXXXXXXXXXXXX
560	MAY	1923	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
560	JUNE	1923	XXXXXXXXXX.X.X.XXXXXXXXXXXXXXXXXXX
560	JULY	1923	XX.....XXXXXXXXXXXXX..XXXXXXX..X.
560	AUG	1923	X.XXXXXX.XXXXXXXXXXXXXX.X..XXXXX
560	SEPT	1923	XXXXXXXXXXXXXXXXXXXXX..XXXXXXX
560	OCT	1923	XXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXXXXXX
560	APR	1924	X.XXXXXXX
560	MAY	1924	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXXX
560	JUNE	1924	XXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXX
560	JULY	1924	XXXXXXXXXXXXXXXXXX..XXXXXXXXXX.XXXXX
560	AUG	1924	..XXXXX.XXXXXXX.XX.X.XXX..XXX.XX
560	SEPT	1924	XX.XXXX.XXXXXXXXXXX.....XX.
560	OCT	1924	X.....XXXXXXXXX.....

STA'N MO. YR. X = GOOD DAY . = BAD DAY

560	APR	1925	XXXXXXXXXX.X.XXXXX
560	MAY	1925	XXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXX.XX
560	JUNE	1925	XXXXXX.XXXXXXXXXXXXXXXXXX.XXXXXXXXX
560	JULY	1925	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXX
560	AUG	1925	XXXXXXXXXX..XXX...XXXXX..X..X..X.
560	SEPT	1925	XX...XX.....XX.....XXXXXXXXXXXXXXXX
560	OCT	1925	XXX...XXXXXXXXXXXXXXXXXX.....
560	APR	1926	XXXXX.XX.XX..XXXXXXXXXXXXX
560	MAY	1926	XXXXXXXXX.XXXXXXXXXXXXXX..XXXXXXXXXXXXX
560	JUNE	1926	XXXXXXXXX...XXXXX..XXXXXX.XXXXXXX
560	JULY	1926	XXXXX..XXXXXXXXXXXXXXXX.XXXXXX.X.XXXXX
560	AUG	1926	XXXXXXXXXXXXXXXXXXXXXXX.XX..XXXXXXXXXX.
560	SEPT	1926	.XXXXX..X..XXX.....X.....XXXXXX
560	OCT	1926	XXXXXX.XX.....XXXXXXXXXXXXX
560	APR	1927	X...XXXXXXXXX...XXXXXXXXXX...
560	MAY	1927	.XXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXX...XXX
560	JUNE	1927	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.X..XXX.X
560	JULY	1927	...XX...XXXXXXXXX..XXXXXXXXXXXXXXXXXX.
560	AUG	1927	XXXXXX.XXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXX
560	SEPT	1927	.X.XX.XXXX.....XXXXXXXXXX..X.X..
560	OCT	1927	XXXXXXXXX.X.....
560	APR	1928	XXXXXXXXXXXXX
560	MAY	1928	XXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXX.XXXXX
560	JUNE	1928	XX.XXX.XXXXXXXXXX.XXXXXXXXXXXXXXXXXX
560	JULY	1928	XXX.X.XXXXXXXXXXX..XXXXXXXXXXXXXXXXX..
560	AUG	1928	.XXXXXXXXXX.XXX..X.XXXXXX..XXXXXXXXX
560	SEPT	1928	XXXXXX..XXXXXXXXXXXXX..XXXXXXXXXXXXXX
560	OCT	1928	X.....X.....
560	APR	1929	XXXXXXXXX..XXXXXXXXXXXXXXXXX
560	MAY	1929	XX.XXXXXXXXXXX..XXXXXXXXXXXXXXXXX.XXXXX
560	JUNE	1929	XXXXXXXXXXXXX.X..XXXXX.XXXX.XXXX
560	JULY	1929	XXXXXXXXXXXXX..XXXXXXXXXX..XXXXX.XXXXX
560	AUG	1929	XXX.XXXXXX.XXXXXXXXXXXXXXXXXXXXXX..
560	SEPT	1929	..XXXXXX.XXXXXXXXXXXXXXXXXX.....XXXX
560	OCT	1929	XXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXX
560	APR	1930	.X.XXXXXX.XXXX.XXXXXXXXXXX.XXXXXX
560	MAY	1930	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXX
560	JUNE	1930	XXXXXXXXXXXXX.X..XXX...X.XXXX.XXXX
560	JULY	1930	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.X..XXXXX
560	AUG	1930	X.XXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXX..X
560	SEPT	1930	XXXXXX..XXXXXXXXXXXXX..XXXXXXXXXXXXX..X
560	OCT	1930	XXXXXX.....
560	APR	1931	..XXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXX
560	MAY	1931	X.XXXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXX
560	JUNE	1931	XXXXXXXXXX..XXXXXX..XXXXXXXXXXXXXXXXX
560	JULY	1931	XXXXXXXXXXXX.XX..XXXXXXXXXXXXXXXXXXXXX
560	AUG	1931	XX...XXXXXXXXXXXXXXXX.XXXXXX..X.XX
560	SEPT	1931	XXXXXX..XXX.XXX.....XXXXXXXXXX..
560	OCT	1931	.XX.....XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
560	APR	1932	X...XXXXXXXXXX.X.....XXXXX
560	MAY	1932	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.X..XXXXXX

STA#N MO. YR. X = GOOD DAY . = BAD DAY

560	JUNE	1932	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.X
560	JULY	1932	XXXX.XXXX..XXXXXXXXXXXXXXXXXX.XX..XX
560	AUG	1932	XXXXXXXXXXXXX...XXXXXXXXXXXXXXXXXX...
560	SEPT	1932	XXXXXXXXXXXXXXXXXXXXX...XXXXXXXXXXXXX
560	OCT	1932	XXXXXXXXXX.....
560	APR	1933	XXXXXXXXXX.XX
560	MAY	1933	XXXXX...XXXXXXXXXXXXXXXXXXXXX.XX.XX
560	JUNE	1933	XXXXXXXXXXXXXXXXXXXXXXXXXX..XX.XXXXX
560	JULY	1933	XXXXXXX.XXXXXXXXXXXXXXXXXXXXX..XX..
560	AUG	1933	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.
560	SEPT	1933	X.....XXXXXXXXX..X.....X.....XXXX
560	OCT	1933	X.XXXXXXXXXXX.....
560	APR	1934	..X.XX..X.XX..XXX.XXXXXXXXXX..X
560	MAY	1934	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..
560	JUNE	1934	XX.XXXXXXXXXXX..XXXXXXXXX.XXX....
560	JULY	1934	XXXXXXXXXXXXX..XXXXX..XXXXXXXXXX.X
560	AUG	1934	XX.XX..X.XX.XXXXXXXXXX..XXXXXX..
560	SEPT	1934	XXXXXXXXXX.....X.
560	OCT	1934	...XX...XXXXXX..XX.....
560	APR	1935	XX.....XXXXX..XXXXXX..
560	MAY	1935	XXXXX.XX...XXXXX..XXXXX..XXXXXXX
560	JUNE	1935	XX..XXXXXXXXXXXXXXXXX..XX.XXXXXXX.
560	JULY	1935	.XXXXX...XXXXXXXXXXXXXXXXX.X..X.XXX
560	AUG	1935	XXX...XXXXXX..XXXXXXX..XXXXXXX
560	SEPT	1935	XXX.XXXXX..XX..XXXXXXXXXXXXXXXXXX
560	OCT	1935	XXXXXXXXXX.....XX.....
560	APR	1936	XX..XXXXX.....X..XXX
560	MAY	1936	XXXXX.XXXXXXXXXXX.XX.XXXXXXXXXXXXX
560	JUNE	1936	XXX..X.XXX..XX...XXXXXXX.....
560	JULY	1936	X..X.XXXXXX.XXXXXXXXXXXXXXXXX..XXXX
560	AUG	1936	XXXXXXXXXXXXX..XXX.XX..X..XXXXXXXX
560	SEPT	1936	XXXXXXXXXX.....X...X..XXX...
560	OCT	1936	...XXXXXXXXXX..XXXXXXXXXX.....
560	APR	1937	.XXXXXXXXXXXXXXXXXX.XXXX.....XXX
560	MAY	1937	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
560	JUNE	1937	XXXXXXXXXXXXXXXXXXXXX.XXXX.XXXXXXX
560	JULY	1937	XX..XXXXXXXXXX.XXX.XX.XXXXXXXXXXX
560	AUG	1937	XXXXXXXXXXXXX...XX.XXX..X...X..X
560	SEPT	1937	...XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.....
560	OCT	1937	XXX.....XXXXX.XXXXXX.....
560	APR	1938	.X.....XXX..XXXXXX.X.....XXXXXX
560	MAY	1938	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
560	JUNE	1938	XXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXX..
560	JULY	1938	XXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXXXXX
560	AUG	1938	XXXXX...XXXXXXXXX..XXX.X.XXXXXXXXX
560	SEPT	1938	XXXXX...XXXXXXXXXXXXXXXXXXXXXXXXXX
560	OCT	1938	XXX.....XXXXXXXXXXXXXXXXXX
560	APR	1939	XXX..XX.XXXXXXXXXXXXXXXXXXX
560	MAY	1939	XXXXXXXXXXXXXXXXXXXXX.XX.XXXXXXX.XX.
560	JUNE	1939	XXXXXXXXXXXXX..XXXXXXXXXXXXX.XXX.XXX
560	JULY	1939	XXXXXXXXXXXXXXXXXX...XXXXXXXXXXXXX

STA'N MO. YR. X = GOOD DAY . = BAD DAY

560	AUG	1939	XXX.XXXXXX.XXXXXXXXXXXXXX.XX...X
560	SEPT	1939	X..XXX..X.....XXXX.....
560	OCT	1939	.X.....X.....
560	APR	1940	XX.XXXXXX.XXXX.XX..
560	MAY	1940	XXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXX.
560	JUNE	1940	XXXXXXXXXXXXX.XXXXXX.X.XXXXXXXXXX.
560	JULY	1940	XXXXXXXXX..XXXXX..XXXXX.XXX.XXXX
560	AUG	1940	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
560	SEPT	1940	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXX.
560	OCT	1940	...XXXXXXXXXXXXXXXXXX..XXXXXXXXXXXX
560	APR	1941	...XXXXXXXXXXXX..XXXXXXXXXXXXXXXX
560	MAY	1941	.X.X..XXXX..XXXXXXXXXXXXXXXXXXXX.XXX
560	JUNE	1941	XXXXXXXXXXXXXXXXXXXXX.XXX.XXXXX..XXX.
560	JULY	1941	XXXXXXXXX..XXXXXXXXXXXXXXXXX.X...X..X
560	AUG	1941	XX..X..XXXXXX..XXXXXXXXX..XXXX...
560	SEPT	1941	XX...XX.....
560	OCT	1941	XXXXXXXXXXXXX.....
560	APR	1942	X.....XXXXXXXXXXXXXXXXXXXX
560	MAY	1942	XXXXXXXXXXXXXXXXX..XXXXXXXXXXXXX..XXXX
560	JUNE	1942	XXXXXXXXX..XXXXX.X.XX.XXX.XXXXX
560	JULY	1942	XXXXX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XX.
560	AUG	1942	XXXXXXXXXXXXXXXXXXXXX..XXXXXX.....
560	SEPT	1942	..XX.XX..XXXX.....XXXXXXXXXXXXX
560	OCT	1942	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.....X.....
560	APR	1943	...XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
560	MAY	1943	XXXXX.....XX..XXXXXXXXXXXXX.....X.X.
560	JUNE	1943	.XXXXXXXXX..XXXXXXXXXXXXX.....XXXXXX
560	JULY	1943	XXXXXXXXX.XX.X..XXXXXXXXXXXXXXXXXXXXX..
560	AUG	1943	.XX.XXXXXXXXXX.XXXXXXX..XXX.XXXXX
560	SEPT	1943	.XX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
560	OCT	1943	XXXXXXXXXXXXX..XXXX.....
560	APR	1944	.XXXXXXXXXXXXX.....XXXXXXXXXXXXXXXXXXXX
560	MAY	1944	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXXXX
560	JUNE	1944	X...XXXXXXXXX..XXXXXXXXXXXXX.XXXXX
560	JULY	1944	XXXXX.XX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.X
560	AUG	1944	XXXXXXXXXXXXX.XXX.XXXXXXXXXXXXXXXXXX.
560	SEPT	1944	XXXXXXXXXXXXXXXXX.....X...
560	OCT	1944	..XXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXX.
560	APR	1945	X..XXX..X.....XX
560	MAY	1945	XXXXXXXXXXXXXXXXXXXXX.XXXX..XXXXXX.
560	JUNE	1945	XXXXXXXXXXXXX.XXXXXXXXXXXXXX.....XX
560	JULY	1945	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XX
560	AUG	1945	XXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXX
560	SEPT	1945	XXX.XXXXXXXXXXXXXX.X.....XXX
560	OCT	1945	XXXX.....XXXXXXXXXXXXX.....
560	APR	1946	XXXXXXXXX.XXXX.XXXXXXXXXX
560	MAY	1946	XXXXXXXXXXXXXXXXXXXXX..XXXXX..XXX
560	JUNE	1946	XXXXX.XXXXXXXXXX.XXXXXXXXXX...X.XX
560	JULY	1946	X.XXXXXXXXXX..XXXXXXXXXXXXXXXXX.XXX
560	AUG	1946	XXXX.XXXXX.XXX..XXXXXXXXXXXXXXXXXXXX
560	SEPT	1946	XXX..XXXXXXXXXXXXX..XX...XXXXXXXX

STATION MO. YR. X = GOOD DAY . = BAD DAY

560	OCT	1946	XXXXXXXXXXXXXXXXXXXXX.XX.....
560	APR	1947	X...X.XXXXXX..XXXXXXXXXX
560	MAY	1947	XXXXXXXXX.XXXXXXXXXX.XXXXXXXXXXX.X
560	JUNE	1947	XXXXXXXXXX.XXXXXXXXXXXXXXXXXXX...XX
560	JULY	1947	XXXXX..XX...X..XXXXX.X.....XX.XXX
560	AUG	1947	XXXXXXXXX.XX.X.....XXXXXXXXXXXXX
560	SEPT	1947	XXX.....XXX.....X.X.....XXXXX
560	OCT	1947	XX.XXXXXXXXXX.....
560	APR	1948	X.....
560	MAY	1948	..XXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXXX
560	JUNE	1948	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.X..XXXX
560	JULY	1948	XXXX.....XX..XXXXXXXXXX.XXXXXXXXXXX
560	AUG	1948	XXX.....XXXX..XXXX..X..X..XXXXX
560	SEPT	1948	XXXXXXXXXXXXXXXXX...XXXXX..X..XX
560	OCT	1948	XXXXXXXXXX...X..XXXXXXXXXXXXXXXXXX
560	APR	1949	..X..XXXXXXXXXXXXXXXXX..XXXXXXXXXX
560	MAY	1949	XXXXXXXXXXXXXXXXXX.XXXXX.XXXXX.X..XX
560	JUNE	1949	XXXXXXXXXX.XXXXXXXXXXXXXX.XXXX.X..X
560	JULY	1949	XXXXXX.XXXXXXX..XXX.XX.XXXXXXXXXX
560	AUG	1949	XXXXXXXXX.X..XXX..XX....XXXXXXXXXX
560	SEPT	1949	XX.XXXXXX.XXXXXX..XXXXXXXXXXXXX.X
560	OCT	1949	XX.....
560	APR	1950	XXX..XXX.X....XXXX
560	MAY	1950	XXXX..XXXXXXXXXXXXX..XXX.XXXX.XXXX
560	JUNE	1950	XX...XXXXXXXXXXXXXXXXXXXXXXXXXXXX
560	JULY	1950	XXXXXXXXXX.XXXX..XXXXXXXXXXXXX..XXXX
560	AUG	1950	XXXXX.XX..X.X..XXXXXXXXXXXXXXXXXX.
560	SEPT	1950	XX.XXXXXXXXXXXXXXXXXXXXXXXXXX.....
560	OCT	1950	...XX...XXXXX.....
560	APR	1951	.XX..XX.XXX.....XXXXXXXXXX
560	MAY	1951	...XXXXXXXXXXXXXXXXXXXXX.XXXX.XXX
560	JUNE	1951	XXXXXXXXXXXXXXXXXXXXX.XXX.XXXXXXX
560	JULY	1951	X.X..X.XXXX..X..X.XXXXXX...XX.X
560	AUG	1951	XXX.X..XXXXXXXXXXXXX..XXXXX...XX
560	SEPT	1951	XXXXXX.XXXXXXXXXXX.XX.....
560	OCT	1951	XXXXXXXXXXXXXXXXX.....
560	APR	1952	XXXXXXXXXXXXXXXXXXXXX
560	MAY	1952	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXX
560	JUNE	1952	XXXXXXXXXX..XXXX.XXX.X.XXXXXXX
560	JULY	1952	XXXX.XXXXXXXXXX..XX..XXXXXXXXXXXX
560	AUG	1952	XXXXX.XXXXXXXXXXXXXX.XX...X
560	SEPT	1952	X..XXXXXXXXXXXXX.X.XXXXXXXXXXXXX
560	OCT	1952	X.XXXXXXXXXX.XX.XXXXXXXXXX.XXXXXX
560	APR	1953	..XX.....XXXXXXXXXXXX..
560	MAY	1953	.XXXXX..XXXXXXXXXXXXXXXXXXXXX..
560	JUNE	1953	..XXXXXXXXXXXXX..XX..XXX.X.X.XXX
560	JULY	1953	XXX.XXXXXXXXXX..XXXXXX..XXXXX..
560	AUG	1953	XXXXXXXXXXXXXXXXXXXXX..XXX.XXXXXX
560	SEPT	1953	..XXXXXXXXXX.XXXXXX..XXXXXXXXX...
560	OCT	1953	..XXXXXXXXXXXXXXXXXX.XXXXXX..XX...
560	APR	1954	XX.....

STAIN MO. YR. X = GOOD DAY . = BAD DAY

560	MAY	1954	.XXXXXXXXXXXXX..XXXXXXXXXXXXX..XXXXX
560	JUNE	1954	XXX..XXXXXXXXXXXXX.....XXXXXXXXXXXXX
560	JULY	1954	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXX
560	AUG	1954	X..XXXXX.XXXXXXX.X.XXXXXXXXXXX.X
560	SEPT	1954	X..XXXXXXXXX.....XXXXXXXXX....
560	OCT	1954	XXXXXXXXX..XXXXXXXXXXXXXXXXXX
560	APR	1955	XXXXXXXXX.XXX.XX..X..X....X
560	MAY	1955	XXXXXXXXX..XXX.XXXXXXXXXXXXXXXXXXX..X
560	JUNE	1955	XXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXX
560	JULY	1955	X.XX..XXXXXXXXX.XX..XXXXX...X..XX
560	AUG	1955	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
560	SEPT	1955	XXXXXXXXXXXXXXXXXXXXX..X.....XX.....
560	OCT	1955	..XXXXXXXXXXXXXXXXXXXXX.....
560	APR	1956	XXXXXXXXXXXXXXXXX.....
560	MAY	1956	.XXXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXXX
560	JUNE	1956	XXX..XXX..XXXXXXXXXXXXX..XX..XXX
560	JULY	1956	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXX
560	AUG	1956	XX..XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..X
560	SEPT	1956	...XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.....
560	OCT	1956	XXXXXXXXXXXXXXXXXXXXX.....
560	APR	1957	..XX.....XXXXX..XX..XXXXXX
560	MAY	1957	X.XXXX..XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
560	JUNE	1957	XXXXXXXXXX.X.XXXXXXX..X.XXXXXXX
560	JULY	1957	..XXX.XXX....X..X.XXXXXXXXXXXXXX..
560	AUG	1957	..XXXXX.....XXXXXX....XXXXX
560	SEPT	1957	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
560	OCT	1957	.....
560	APR	1958	X.XXXXXXXXXXXXXX..XXX.XXX
560	MAY	1958	..XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XX
560	JUNE	1958	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..X..
560	JULY	1958	XXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX
560	AUG	1958	XX.XX.X.XXXXXXXXXXXXXXXXXXXXXX.
560	SEPT	1958	.XXXXXXX..XX.XXX.....
560	OCT	1958	.XXXXX.....XXXXXXXXXXXXXXXXXXXXX
560	APR	1959	XXXXXXXXXXXXXXXXX..XXX..
560	MAY	1959	X..X.XXXXXXXXXXXXXX..XXXXXX
560	JUNE	1959	XXXXXXXXXXXXX.X..XXXXXX.XX.XXXXX
560	JULY	1959	X.XX.XXX.XXXXXXXXXXXXXX.XXXXXXX
560	AUG	1959	X.X.XX.XX.XXXXXXXXXXXXXX.X....XXX
560	SEPT	1959	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XX.....
560	OCT	1959	XXX.....XXX.....
560	APR	1960	..XXXXXXXXXXXXX.XXXXXXXXXXXXXXXXXXX
560	MAY	1960	.X..XXXXXXX..X..XX..XXXXXXXXX
560	JUNE	1960	XXXXX..XXXXXX.XX....XXXXX.XXXXX
560	JULY	1960	XXXXXXXXXX.XXXXXXXXXXXXXXXXXXXXXX
560	AUG	1960	XX.XXXXXXXXXX..XXXXXX.X..XXXXXX
560	SEPT	1960	XXX....XXXXXXXXXXXXXXXXXXXXX
560	OCT	1960	XX..XXXXXXXXXXXXXXXXX..X..X.....
560	APR	1961	X.....XX.XXXXXXXXXXXXXX
560	MAY	1961	..X.....XXXXXXXXXXXXX.XXX.XXXX
560	JUNE	1961	XXXXXX.X.X..XXXXXX.XXXXXX..X..

STAIN MO. YR. X = GOOD DAY . = BAD DAY

560	JULY	1961	.XXXXX.XXXXXXXXXXXXXX.X....XXXXXX
560	AUG	1961	XXXX.XXXXXXXXXXXXXXXXXXXXXXXXXX..
560	SEPT	1961	XXXXXXXXXX.XXXXXXXXXX....
560	OCT	1961	.XX.....XXXXXXXXX.....
560	APR	1962	.XXXXX.....XXXXXXXXXX.XX...X...X
560	MAY	1962	XX...XXXXXXXXXXXXXXXXX.XXXXXXXXXX.XX
560	JUNE	1962	XXXXXXXXXXXX.XXXX.XXXXXXXXXXXXXX.XXX
560	JULY	1962	XX.XXXXXX.XXXXXX...XXXXXXXXXX.XXX
560	AUG	1962	X.X..XXXXX..XXX.XX...XXXXX.XX..
560	SEPT	1962	..XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXX
560	OCT	1962	.XXXXXXXXXX.....XXXXXXXXX
560	APR	1963	...X.....XXXX...X...XXXXXXXXXX
560	MAY	1963	XXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXX
560	JUNE	1963	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
560	JULY	1963	XXX.XX...XXXXXXXXXXXXXXXXX.XXXX..XXX
560	AUG	1963	XXXXXXXXXXXXXXXXXX.XXXXX..XXXXXXXXXX
560	SEPT	1963	.XX.XXXXXXXXX.....XXXXXXXXXXXXXXXXX
560	OCT	1963	XXX...XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
560	APR	1964	..X...XXXXXX.X...X.....XXXXXX.
560	MAY	1964	XXXXXX...XXXXX..XX.XXXXXXX
560	JUNE	1964	XXXXX.X.XXXXXX..XXX..XX..XXX..XX
560	JULY	1964	XXXXXXXXXXXXXXXXX...XXXXXXXXXXXXXXXXX.X.
560	AUG	1964	..X..XXXXXX.XXX...XXXXXX.XXXXXX
560	SEPT	1964	..X.X.....XXXXX..XXXXXX.....
560	OCT	1964	XXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXX.XX...
560	APR	1965	X...X.X.....XXXXXX.
560	MAY	1965	XXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXX..X
560	JUNE	1965	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.....XXX
560	JULY	1965	XXXXXX...XXXXXX..XXXXXXXXXXXXX.XXX
560	AUG	1965	XXXXXXXXXXXXX..XXXXXXXXXX..XX...XXX
560	SEPT	1965	XX...X...XX.X...XXXXXX..
560	OCT	1965	XXXXXX.....XXXX.
560	APR	1966	...XX.....X.....XXXX.....
560	MAY	1966	XXXXXXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXX
560	JUNE	1966	XX.XXX.XXXXXX..XXXXXXXXXXXXXXXXXX
560	JULY	1966	XXXXXX..XX.XXXX.XX..XXXXX.XXXXX
560	AUG	1966	XXXXX.XXXX..X..XXXXXXXXXXXXX..XXX
560	SEPT	1966	XXXXX..XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
560	OCT	1966	XXXXXXXXXXXXX.XXXXXX...XX.....
2520	APR	1932	X..X...XXXXXX.....XXXXX
2520	MAY	1932	XXXXXXXXXXXXXXXXX.XXXXXX.X...XXXXXX
2520	JUNE	1932	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXX.XX
2520	JULY	1932	XXX..XXXXXXXXXXXXXXXXX..XXXXX.XXX.XX
2520	AUG	1932	XXXXXXXXXX...XXX..XXXXXXXXXXXXX.
2520	SEPT	1932	..XXXXX.XX...XX.....XXXXXXXXXX
2520	OCT	1932	XXXXXXXXXX.....
2520	APR	1933	X.....XXXXXXXXXXXXX
2520	MAY	1933	XXXXXX..XXXXXXXXXXXXXXXXXXXXX.XXXXX
2520	JUNE	1933	XXXXXXXXXX..XXXXXXXXXXXXX.XX...XXX
2520	JULY	1933	XXXXXXXXXX.XXXXXX.XX..XXXXX..X..X
2520	AUG	1933	XX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.

STATION MO. YR. X = GOOD DAY . = BAD DAY

2520	SEPT	1933	XXXXXXXXX.....XX.....
2520	OCT	1933	..XXXXXXXX.....
2520	APR	1934	X.....XX.....XXXXXXXXXXXXXXXXX...
2520	MAY	1934	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..
2520	JUNE	1934	.XXXXXXXXXXXXXXXXXXXXX.XXX.....XX.....
2520	JULY	1934	.XXXXXXXXXXXXX.X.X.X.X..XXXXXXXXXXXXX.
2520	AUG	1934	XXX.XXXXXXXXX.XXXX.X..X..XXXXXXXXXX
2520	SEPT	1934	XXX.XXXXX.....
2520	OCT	1934	.X...XX...XXX.....
2520	APR	1935	X...XXXX.XXXXXX..X..
2520	MAY	1935	.XXX..XXXX.XXXXXXXXXXXXXX..XXXXXX
2520	JUNE	1935	XXXXXX.XXXX.XXXXXX..X....XXX..
2520	JULY	1935	..XXXXX...XXXXXX...XXXXXX.XXX...
2520	AUG	1935	XXX...XXXXXX.....XXXXX...XXXXX.
2520	SEPT	1935	..X.XXXXXXX.XXX.....XX.....XXXX
2520	OCT	1935	XXXXXXXXX.....
2520	APR	1936	XXXX.....XXX.XXX
2520	MAY	1936	XXXXX..XX.XXXXXX..XXXXXXXXXXXXXXXXXX
2520	JUNE	1936	XXXXXXXXXXXXX.XXXX..XXXXXXXXXXXXX..
2520	JULY	1936	XXX..XXXXXXXXX...XXXXXXX.X..XXX.X
2520	AUG	1936	XXXXXXXXXXXXX.XX.XXXXXXXXXXXXXX.XXXXXX
2520	SEPT	1936	XXXXXXXXXXXXX.....XX.....X...
2520	OCT	1936	XXXXXXXXXX...XXX...X.....
2520	APR	1937	..XXXXXXXXX..XXXXXXXXXXXXX.X...XXXXX
2520	MAY	1937	XXXXXXXXXXXXX.XXX..XXX.XX..XX.XXXXX
2520	JUNE	1937	XXXXX.X.XXXXXXXXXX.XXXXXX..XXXXX
2520	JULY	1937	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
2520	AUG	1937	XXXXXXXXXXXXXXXXX..X..X...XXXXXX.XX
2520	SEPT	1937	XXXXXXXXXXXXXXXXXXXXX.XXXX....
2520	OCT	1937	XX.....XXXXX.....
2520	APR	1938	XXXX.XXXXXX.....XXXXXX
2520	MAY	1938	XXXXXX..XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2520	JUNE	1938	XXXXXXXXXXXXX.XXXXXXXXXXXXXX.XX..
2520	JULY	1938	.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2520	AUG	1938	XXXXX.XXXXXX.X..XXXXXX..XXXXXXXXXX
2520	SEPT	1938	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2520	OCT	1938	X...XXXXX.X.....XXXXXXXXXXXXX...
2520	APR	1939	XX..XXX.XXXXXXXXXXXXXXXXXXX
2520	MAY	1939	XXXXXXXXX.XXXXXXXXXXXXXX.XXXXXXX.XXX
2520	JUNE	1939	XXXXXXXXXXXXX..XXXXXXXXXXXXXXXXXXXXX..
2520	JULY	1939	X.XXXXXX.XXXXXXX...XXXXXXXXXXXXX.
2520	AUG	1939	XXXXX.XXXXXX..XXXXXXXXXXXXXXXXXXXXX..
2520	SEPT	1939	XXXXX...XXXXXXXXXXXXXXXXXXXXX...X
2520	OCT	1939	XXX.....
2520	APR	1940	X.....X...XXXXXXXXXX.XXX..X
2520	MAY	1940	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXX
2520	JUNE	1940	XXXXXXXXXXXXX..XXXXX.XXXXXX..XX
2520	JULY	1940	XXXXX.XX...XXXXXX.XXXX.X.XXXXXXX
2520	AUG	1940	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2520	SEPT	1940	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX.
2520	OCT	1940	...XXXXXXXXXXXXXXXXX.....

STA'N MO. YR. X = GOOD DAY . = BAD DAY

2520	APR	1941	XXXXXXXXXXXXXXXXXXXXXXXXXXXX
2520	MAY	1941	XXXX..XXXX..XXXXXXXXXXXXXXXX
2520	JUNE	1941	XXXXXXXXXXXXXX.XX.X.XX.XXXX.XXXXX
2520	JULY	1941	X..XXXXX.XXXXXXXXXXXXXXXXXX.XXX..XX.X
2520	AUG	1941	XX..X..XXXXXXXXX.X.XXXXXX..XXXX...
2520	SEPT	1941	XXXX.....
2520	OCT	1941	XXXXXXXXXXXXX.....
2520	APR	1942	XXXXX.XXXXXXXXXX
2520	MAY	1942	XXXXXXXXXXXXXX.XXXXXXXXXXXXXX.XXXX
2520	JUNE	1942	XXXXXXXXXX..XXXXX..XXXXX.XX.XXXXX
2520	JULY	1942	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
2520	AUG	1942	XXXXXXXXXXXXXXXXXXXXX.XXXXXXX....
2520	SEPT	1942	..XXXXXX.XXXXXXXXXX.XXXXXXXXXXXXXX
2520	OCT	1942	XX..X..XXXXXXXXXXXXX.....
2520	APR	1943	.X.XXXX..XXXXXXXXXXXXXXXXXXXXXXXXX
2520	MAY	1943	XXXX.....XX..XXXXXXXXXXXXX.XXXXXX
2520	JUNE	1943	...XXXXX..XXXXXX..XXX.X..XXXXX
2520	JULY	1943	XX.XXX..X.XX.XXXXXXXXXXXXXXXXXXXXX
2520	AUG	1943	XXX..X.XXX..XXXXXXXXXX.XXXXXXXXXX
2520	SEPT	1943	..X..XXXXXXXXXXXXXXXXX..XXXXXXXXXX
2520	OCT	1943	XXXXXXXXXXXXX..XX.....
2520	APR	1944	.XX..XXXXXXXXX.....XXXXXXXXXXXXX
2520	MAY	1944	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXX..
2520	JUNE	1944	X.XXX.XXXXXX..XXXXXXXXXXXXX..XXXXX
2520	JULY	1944	XX.X.X.XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2520	AUG	1944	XX.XXXXXX.X.XXXX.X.X.XXXXXXXXXXX.
2520	SEPT	1944	XXXXXXXXXXXXXXXXXX.....XXXXXX...
2520	OCT	1944	XXXXXXXXXXXXXXXXXXXXX.....XXXX..
2520	APR	1945	XX.X.....XX
2520	MAY	1945	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..
2520	JUNE	1945	.XXXXXXXXX..X.XXXXXXXXXXX.X...XXXX
2520	JULY	1945	.X..XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.X
2520	AUG	1945	XX.XXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
2520	SEPT	1945	XXXXXXXXXXXXXX.XXX..X.....XX
2520	OCT	1945	XXXX..XXXXXXXXXXXXXXXXXXXXX.....
2520	APR	1946	XXXXXXXXXXXXXXXXXXXXXXXXXXXX
2520	MAY	1946	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XX
2520	JUNE	1946	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXX
2520	JULY	1946	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XXX
2520	AUG	1946	XXXXXXXXXXXXX.XXX..XXXXXXXXXXXXXXXXXX
2520	SEPT	1946	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.....XXXXXX
2520	OCT	1946	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..X.....
2520	APR	1947	X.....XXX.X.....XXXXXXXXX
2520	MAY	1947	XXXXXXXXXX.XXXXXXXXXX.XXXXXXXXXXXXXX
2520	JUNE	1947	XXXXX..XXXXXXXXXXXXX.XXXX..XXXXXXX
2520	JULY	1947	XXXXX.X.XX..X..XXXXXXXXX.XXXX.XXX
2520	AUG	1947	XXX.XX..XXXXX..X...XXXXX.XXXXXXX
2520	SEPT	1947	XXX.....XXX.....XXX.....XXXXX
2520	OCT	1947	XXXX.....XXX.....
2520	APR	1948	XX.....
2520	MAY	1948	..XXX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXX

FILE	NO.	NAME	DATE
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1002	1002	1002	1002
1003	1003	1003	1003
1004	1004	1004	1004
1005	1005	1005	1005
1006	1006	1006	1006
1007	1007	1007	1007
1008	1008	1008	1008
1009	1009	1009	1009
1010	1010	1010	1010
1011	1011	1011	1011
1012	1012	1012	1012
1013	1013	1013	1013
1014	1014	1014	1014
1015	1015	1015	1015
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1019	1019	1019	1019
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1080	1080	1080	1080
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1094	1094	1094	1094
1095	1095	1095	1095
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1097	1097	1097	1097
1098	1098	1098	1098
1099	1099	1099	1099
1100	1100	1100	1100

STATION MO. YR. X = GOOD DAY . = BAD DAY

2520	JUNE	1948	XXXXXXXXXXXXXXXXXXXXX..XXX..XXXX
2520	JULY	1948	XXXX..X.XXXXXXXXXXXXXXXXXXXXXXXXXX
2520	AUG	1948	XXXXX.XXXX..XXXXXXXXXX.....XXXXX
2520	SEPT	1948	X.X.XXXXXXXXXX.....XXXXXXXXXX.....
2520	OCT	1948	.XXXX.....XX.XXXXXXXXXXXXXXXXXXXXXX
2520	APR	1949	.XX..XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2520	MAY	1949	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXX
2520	JUNE	1949	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX....X.XX
2520	JULY	1949	XXXXXXXXXXXXXXXXXX..XXXXXXXXXXXXXX.XX
2520	AUG	1949	XXXXXXXXX.XX.XXXXXXXXXXXXX..XXXXXXXXX
2520	SEPT	1949	XXXXXXXXXXXXXXXXXXXXX.....XXXXXXXXXXXX
2520	OCT	1949	XXXXX.....
2520	APR	1950	XXXXX.XXXXXX.X..XXXX
2520	MAY	1950	XXXXXXXXXXXXXXXXXXXXX..XXX..XXX.XXXX
2520	JUNE	1950	XXX..XXXXXXX.XXXXXXXXXXXXXXXXXX.XXXX
2520	JULY	1950	.XXX.XX..XX.....XXXXXXXXXXXX.XXXXX
2520	AUG	1950	.XXXX..XXXXXXX..XXXXXXXXXX..XXXXXXXXX
2520	SEPT	1950	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..
2520	OCT	1950	XXXXXXXXXXXXXXXX.....
2520	APR	1951	.XX.XX..XX.....XX.XXXXX.X
2520	MAY	1951	...XXXXXXXX..X.XXX.XXXXX..XXX.XX
2520	JUNE	1951	XXXXXXXXX.XXXXXXXXXXXXXXXXXX.XX..XXX.
2520	JULY	1951	XXX..XX.XXXXXXXXXXXXXXXXXXXXXXXXXX.XX
2520	AUG	1951	XXXXX..XXXXXXXXXXXXXXXXXXXXX.X..XXXX
2520	SEPT	1951	XXXXXXXXXX..XXXXXXXXXXXXXXXX.....
2520	OCT	1951	X..XXXXXXXXX.....
2520	APR	1952	XXXXXXXXXX.XXXXXXXXXXXXXX
2520	MAY	1952	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XX
2520	JUNE	1952	XXX.X..XX..XXXXXXXXX.X..XXX.XXXX
2520	JULY	1952	XXX..XXXX.XXXX..XXX..XX..XXXXXX
2520	AUG	1952	XXXXXXXXXXXXXXXXXX.XXXXXXXXXX..XX..XX
2520	SEPT	1952	XX..XXXXXX..XXX..XXXXXXXXXXXXX.X
2520	OCT	1952	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXX
2520	APR	1953	..X..X.....XXXXXXXXXXXXXXXXX.
2520	MAY	1953	.XXXX.....XXXXXXXXXXXX.XXXXXXXXXX..
2520	JUNE	1953	..XXXXXXXXXXXXX..X.....XXXXX
2520	JULY	1953	XXX.XXXXX.XXX..XXXX.XX..X..X..
2520	AUG	1953	XXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXXXX.
2520	SEPT	1953	.XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.X..
2520	OCT	1953	XXXXXXXXXXXXXXXXXXXXX.X..XXX..
2520	APR	1954	XX.....X.....
2520	MAY	1954	XXXXXXXXXXXXX..XXXXXXXXXXXXX..XXXX
2520	JUNE	1954	XXX.XXXXXXXXXXXXX..X..XX.XXXXXX
2520	JULY	1954	XXXXXXXXXXXXXXXXXX.XXXXXXX.X.....
2520	AUG	1954	X....XX..XXXX.X..XX.XXXXXXXXXX
2520	SEPT	1954	..XXXXXXXXXX.XXXXXX..XXXXXXX....
2520	OCT	1954	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2520	APR	1955	XXXXXXXXXX..XXXXX..XX..XX..X
2520	MAY	1955	XXXXXX..XX.XXXXX.XXXXXXXXXXXXXX.X
2520	JUNE	1955	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2520	JULY	1955	..XX..XX.XXXXXXXXXXXXXXXXXX..X..XX

STAIN MO. YR. X = GOOD DAY . = BAD DAY

2520	AUG	1955	..XXXXXXXXXXXXXXXXXXXXXXXXXXXX
2520	SEPT	1955	XXXXXXXXXXXXXXXXXX..X.....
2520	OCT	1955	XXXXXXXX..XX.....
2520	APR	1957	..XX.....XXXXX..XXX.XXXXXX
2520	MAY	1957	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.XX
2520	JUNE	1957	XXXXXXXXXXXX..XXXXXXXXXXXXX.X..XX.
2520	JULY	1957	..XXXXXXXXXXXXX.XX.XXXXXXXXXX.X.XX..
2520	AUG	1957	..XXX.XXX.....XXXXX.XX...XXXXXX
2520	SEPT	1957	XXX.XXXXXXXXXXXXXXXXXXXXXXXXXX
2520	OCT	1957	X.....
2520	APR	1958	X..XXXXXXXXXXXX.....XX.XXX
2520	MAY	1958	..XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2520	JUNE	1958	XXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX.
2520	JULY	1958	XXXXXXXXXXXXX.X..X.XXXXXXXXXXXXXX
2520	AUG	1958	XX.XXXXXXXXXXXXXXXXXXXXXXXXXX.
2520	SEPT	1958	..XXXXXXXXXXXXX.....XX...XXX.....
2520	OCT	1958	..XXXXXX.....XXXXXXXXXXXXXXXXXX
2520	APR	1959	XXXXXXXXXXXXXXXX.....XXXX..
2520	MAY	1959	XXX..,XXXXXXXXXXXXX..XXXXXXX
2520	JUNE	1959	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX.X.XXXXXX
2520	JULY	1959	X...X.X.XXXXX.XXXXXXXXXXXXXXXXXX
2520	AUG	1959	XX..XX.XX.XXX..X..XX.XXX...XXX
2520	SEPT	1959	XXXX.XXXXXXXXXXXXXXXXXX..XXXXXXXXXX
2520	OCT	1959	XXXXX.....
2520	APR	1960	..XX.XXXXXXXXXX..XXXXXXXXXXXXXXXX
2520	MAY	1960	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXX
2520	JUNE	1960	XXXXX..XXXXXXXXXXXXX.X...XXXXXXXXXX
2520	JULY	1960	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXXXXXXXXX
2520	AUG	1960	XXXXXXXXXXXXXXXXXX.XXXXXXX.XXXXXXXXXX
2520	SEPT	1960	XXXXX...XXXXXXXXXXXXXXXXXXXXXXXXXX
2520	OCT	1960	XX.XXX..XXX.....
2520	APR	1961	X.....XXXXXXXXXXXXXXXX.XXX
2520	MAY	1961	X..XXXXXXXX.XXX.XXXXXXX.XXX.XXXX
2520	JUNE	1961	XXXXXX.XXXX.XXXXXXXXXXXXXX.X.....
2520	JULY	1961	X.XXXX..XXXXXXXXXXXXX..X...XXXXXX
2520	AUG	1961	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.
2520	SEPT	1961	XXXXXXXXXXXXX.....X
2520	OCT	1961	XXXXXXXXX.....XXXXX.....
2520	APR	1962	..XX.....XXXXXXXXXXXXX..X...X
2520	MAY	1962	X...XXXXXXXXXXXXXXXXX..XXXXXXX.XXX
2520	JUNE	1962	XXXXXXXXXXXXX.XXXXXXXXXXXXXX..XXX
2520	JULY	1962	XXXXXXXXXX.XXXX.XX.....XXXXXX.XXX
2520	AUG	1962	XXXXXXXXXXXXX...X.XXX..XXXXX..XX
2520	SEPT	1962	XXXXX...XXXXXXXXXXXXXXXXXXXXXXXXXX
2520	OCT	1962	X.XXXXXXXXXX.....X.
2520	APR	1963	...X.....XXXXX..X...XXXXXXXXXX
2520	MAY	1963	...XXXXXXXXXXXXXXXXXXXXXXXXXX.XXXXXX
2520	JUNE	1963	XXXXXXXXXXXXX.XXXXXXXXXXXXXX
2520	JULY	1963	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX..XXX.X.XX
2520	AUG	1963	XXXXXXXXXXXXXXXXXX.XXXXXX..XXXXXX
2520	SEPT	1963	XXX.XXXXXXXXXX.....XXXXXXXXXXXXX

STAIN MO. YR. X = GOOD DAY . = BAD DAY

2520	OCT	1963	XXXXXXXXXXXXXXXXXXXXX
2520	APR	1964	. . X . . . XXXXXX . . . X XXXXXX
2520	MAY	1964	. . . XXXXXXXXXXXXX.XXXXXXXXXX..XXXXXXXXXX
2520	JUNE	1964	XXXXXXXXXXXXXXXXXXXXX.X...X.
2520	JULY	1964	XXXXXXXXXX.XXXX..XXXXXXXXXXXXXXXXXX..
2520	AUG	1964	 XXXXXX . . XXX.XXXXXXXX.XXXXX
2520	SEPT	1964	. . X.XXX..XXXXXXXXXXXXXXXXXXXXX.
2520	OCT	1964	 XXXXXXXXXXXXXXXX.XXXXXX..
2520	APR	1965	. . . XX . . . X.XX XXXXXXXX
2520	MAY	1965	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX..X
2520	JUNE	1965	XXXXXXXXXXXXXXXXXXXXX.XXX..XX
2520	JULY	1965	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
2520	AUG	1965	XXXXX.XXXXXXXXXXXXXX..X....XX
2520	SEPT	1965	 XX XX . . . XX ..
2520	OCT	1965	. . . XX.X
2520	APR	1966	. XXXX XXX
2520	MAY	1966	XXXXXXXXXXXXXXXXXXXXX.XXXXXXXXXXXXXX
2520	JUNE	1966	XXXXXXXXXXXXXXXXXXXXX.XXXX.XX
2520	JULY	1966	X...XXXXXX.XX.X.XXX.XXXXXXXXXXXXXX
2520	AUG	1966	XXXXXXXXX.X..XX..X.XXXXXXXXXX..XXX
2520	SEPT	1966	X..XX..XXXXXXXXXXXXXXXXXXXXX.
2520	OCT	1966	.XXXXXXXXXXXXXXXXXXXXX.XX.....

8.2 Weather Data Used for Checking Purposes

8.2.1 Work Data From Rutledge Ranching Co.

April, 1966

<u>Day</u>	<u>Operation</u>	<u>Comments</u>
1		
2		
3		
4		
5		
6		
7		
8	Started cultivating with Noble Blade	
9		
10		
11		
12		
13		
14		
15		
16		
17		
18	Blading, started seeding grass	
19		
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21		
22		
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28		
29		
30		

May, 1966

<u>Day</u>	<u>Operation</u>	<u>Comment</u>
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21		
22		
23		
24		
25		
26		
27		No rain since started field work
28	Bladed 1100 acres, seeded another 1100 acres since starting.	
29		Thunder shower 1/2 in.
30		Rain 1/2 in.
31		

June, 1966

<u>Day</u>	<u>Operation</u>	<u>Comments</u>
1		Rain 1 in.
2	Due to drought conditions seeding of cereal crops had not started	
3	Dry enough to plow furrow to plant trees	
4		Rain 2/10 in.
5		
6	Began seeding 3:30 P.M. soil stuck to disc in heavy soil, otherwise okay	
7	Seeding	
8	Seeding	Rain 1/10 in. after supper
9	Seeding	Soil damp but still able to work
10	No field work	Rain 1 in.
11	No field work	
12	Seeding and rodweeding 1:00 P.M.	
13	Rodweeding	
14	Seeding 2:00 P.M.	Rain 1/10 in. early A.M., Rain 3/10 in. 6:00 P.M.
15		Rain 1/10 in. 2:00 P.M.
16	Cultivating in A.M., seeding in P.M.	
17	Cultivating	
18	Seeding, rodweeding	
19	Seeding, rodweeding	
20	Seeding, rodweeding	
21	Seeding, rodweeding	
22	Seeding, rodweeding	
23	Seeding, rodweeding	
24	Seeding, rodweeding	
25		Rain 3/10 early A.M. 3/10 in 7:00 P.M.
26		Good weather
27		Good weather
28		Good weather
29		Good weather
30		Good weather

July, 1966

<u>Day</u>	<u>Operation</u>	<u>Comments</u>
1	No field work	
2	No field work	
3	No field work	Rain 3/10 in.
4	No field work	
5	No field work	
6	No field work	
7	No field work	
8	No field work	Rain 2/10 in.
9	No field work	
10	No field work	Rain 7/10 in.
11	Began swathing hay 5:00 P.M.	
12	Swathing	
13	No field work	Rain 2/10 in early A.M.
14	No field work	
15	Swathing, cultivating	
16	Swathing, baling 5:00 P.M.	
17	Swathing, bailing	
18	Swathing, baling	
19	Baling	Shower in P.M. stopped work
20	Baling 4:00 - 5:00 P.M.	Shower in A.M., shower 5:00 P.M.
21	Baling 10:00 - 1:00 A.M.	
22	Baling 1:00 P.M.	
23	Baling 8:00 A.M.	Shower 5:00 P.M.
24	Baling 10:00 A.M.-7:00 P.M. (breakdown)	
25	Swathing, baling 8:30 A.M.-11:00 A.M.	Rain 7/10 in. in P.M.
26	No field work	
27	Baling 2:45 - 7:00 P.M.	
28	Baling 7:30 A.M. - 7:00 P.M.	
29	Baling 7:30 A.M. - 7:00 P.M.	
30	No field work	Rain 3/10 in. early A.M.
31	No field work	Rain 4/10 in. early A.M.

August, 1966

<u>Day</u>	<u>Operation</u>	<u>Comments</u>
1	No field work	
2	Baled 8:00 A.M. - 7:00 P.M.	
3	Baled 8:30 A.M. - 3:30 P.M. (breakdown)	Rain .35 in. 6:30 P.M.
4	No field work	Rain 2/10 in. 2:30 P.M.
5.	No field work	Rain 2 in.
6	No field work	Rain 6/10 in.
7	No field work	
8	No field work	
9	No field work	
10	Swathing, cultivating	
11	Baling 5:00 - 6:15 P.M.	Cloudy all day, shower at 6:15 P.M.
12	Baling 10:30 A.M. - 7:00 P.M.	
13	Baling 8:00 A.M. - 7:00 P.M.	
14	Baling 8:00 A.M. - 7:00 P.M.	
15	Baling 8:00 A.M. - 7:00 P.M.	
16	Baling 8:00 A.M. - 7:00 P.M.	
17	Baling 8:00 A.M. - 7:00 P.M.	
18	Baling 1:30 - 7:00 P.M. (tough)	Showers in A.M.
19	Baled 9:00 A.M. - 7:00 P.M.	
20	Baled 8:30 A.M. - 7:00 P.M.	
21	Baled 8:30 A.M. - 7:00 P.M.	
22	Baled 8:30 A.M. - 3:00 P.M. (breakdown)	
23	Baled 9:30 A.M. - 7:00 P.M. (1 hr. breakdown)	
24	Baled 8:30 A.M. - 7:00 P.M.	
25	Baled 8:30 A.M. - 7:00 P.M.	
26	Broke down all day	
27	Finished baling	
28		
29		
30		
31		

8.2.2 Work Data from Liivan Farms Ltd.

June, 1966

<u>Day</u>	<u>Operation</u>	<u>Comments</u>
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15	Field operations possible	
16	Field operations possible	
17	Field operations possible	
18	Field operations possible	
19	Field operations possible	
20	Field operations possible	
21	Field operations possible	
22	Field operations possible	
23	Field operations possible	1/10 in. rain
24	Field operations not possible	2/10 in. rain
25	Field operations not possible	2/10 in. rain
26	Field operations not possible	1/10 in. rain
27	Field operations possible at 4:00 P.M.	
28	Field operations possible at 11:00 A.M.	1/10 in. rain
29	Field operations possible	
30	Field operations not possible	3/10 in. rain

July, 1966

<u>Day</u>	<u>Operation</u>	<u>Comments</u>
1	Field operation not possible	1/10 in. rain
2	Field operation not possible	1 in. rain
3	Field operation not possible	2.3 in. rain
4	Field operation not possible	1/10 in. rain
5	Field operation not possible	2/10 in. rain
6	Field operation not possible	
7	Field operation possible	
8	Field operation possible	
9	Field operation possible	
10	Field operation possible	
11	Field operation possible	
12	Field operation possible	
13	Field operation possible	
14	Field operation possible	
15	Field operation possible	
16	Field operation possible	
17	Field operation possible	
18	Field operation possible	
19	Field operation possible	
20	Field operation possible	1/10 in. rain
21	Field operation possible	
22	Field operation possible	
23	Field operation possible	
24	Field operation possible	
25	Field operation not possible	6/10 in. rain
26	Field operation not possible	3/10 in. rain
27	Field operation not possible	
28	Field operation 11:00 A.M.	
29	Field operation possible	
30	Field operation not possible	1.1 in. rain
31	Field operation not possible	

August, 1966

<u>Day</u>	<u>Operation</u>	<u>Comments</u>
1	Field operations possible	
2	Field operations possible	
3	Field operations possible	0.1 in. rain
4	Field operations possible	0.1 in. rain
5	Field operations not possible	1.4 in. rain
6	Field operations not possible	1.4 in. rain
7	Field operations not possible	0.2 in. rain
8	Field operations not possible	
9	Field operations possible	
10	Field operations possible	
11	Field operations possible	
12	Field operations possible	
13	Field operations possible	
14	Field operations not possible	0.3 in. rain
15	Field operations not possible	
16	Field operations not possible	0.3 in. rain
17	Field operations not possible	
18	Field operations not possible	
19	Field operations not possible	0.2 in. rain
20	Field operations not possible	0.1 in. rain
21	Field operations not possible	
22	Field operations possible	
23	Field operations possible	
24	Field operations possible	
25	Field operations possible	
26	Field operations possible	
27	Field operations possible	
28	Field operations not possible	1.0 in. rain
29	Field operations not possible	
30	Field operations not possible	0.2 in. rain
31	Field operations not possible	

September, 1966

<u>Day</u>	<u>Operation</u>	<u>Comments</u>
1	Field operations possible	
2	Field operations possible	
3	Field operations possible	
4	Field operations possible	
5	Field operations possible	
6	Field operations possible	
7	Field operations not possible	0.2 in. rain
8	Field operations not possible	0.1 in. rain
9	Field operations not possible	
10	Field operations possible	
11	Field operations possible	
12	Field operations possible	
13	Field operations possible	
14	Field operations possible	
15	Field operations possible	
16	Field operations possible	
17	Field operations possible	
18	Field operations possible	
19	Field operations possible	
20	Field operations possible	
21	Field operations possible	
22	Field operations possible	
23	Field operations possible	
24	Field operations not possible	0.5 in. rain
25	Field operations not possible	
26	Field operations possible	
27	Field operations not possible	0.3 in. rain
28	Field operations not possible	0.5 in. rain
29	Field operations not possible	
30	Field operations possible	

October, 1966

<u>Day</u>	<u>Operation</u>	<u>Comments</u>
1	Field operation not possible	0.2 in. rain
2	Field operation not possible	0.5 in. rain
3	Field operation not possible	0.2 in. rain
4	Field operation not possible	
5	Field operation not possible	
6	Field operation possible	
7	Field operation not possible	0.2 in. rain
8	Field operation not possible	1 in. snow
9	Field operation not possible	
10	Field operation possible	
11	Field operation possible	Snow
12	Field operation possible	
13	Field operation possible	
14	Field operation possible	
15	Field operation possible	
16	Field operation possible	
17	Field operation possible	
18	Field operation possible	
19	Field operation possible	
20	Field operation possible	
21	Field operation possible	
22	Field operation possible	
23	Field operation possible	
24	Field operation possible	
25	Field operation possible	
26	Field operation possible	
27	Field operation possible	
28	Field operation possible	
29	Field operation possible	
30	Field operation possible	
31	Field operation possible	

8.3 PROGRAM USED TO ESTIMATE WORKING DAYS

8.3.1 MAIN PROGRAM

```

C THIS PROGRAM IS USED IN CONJUNCTION WITH FIVE SUBROUTINES.
C THE INPUT DATA IS READ IN THE FOLLOWING FORM
C TWO TABLES OF ADJUSTMENT FACTORS (Z) FOR SOIL DRYNESS AS
C DESCRIBED BY BAIER AND ROBERTSON ARE READ ON CARDS, 20 CARDS
C FORMAT(6X,F5.2).
C MEAN MONTHLY EVAPOTRANSPIRATION, ONE CARD PER STATION BUT
C IF THE NUMBER OF STATIONS IS NOT SEVEN THEN THE SIZE OF
C PEXBAR MUST BE CHANGED ACCORDINGLY, SEVEN CARDS, FORMAT(12X,
C 12F4.2).
C READ COEFFICIENTS DESCRIBING UPTAKE OF WATER, 8 CARDS FORMAT
C (6F5.2).
C READ CAPACITY OF EACH ZONE, 1 CARD FORMAT(6F5.2).
C READ MOISTURE AT THE BEGINNING OF EACH SEASON AND CROP
C STAGE DATES, 1 CARD FORMAT(6F5.2,9I4).
C READ CUMMULATIVE TOTAL DAYS TO THE BEGINNING OF EACH MONTH,
C 1 CARD FORMAT(12I4).
C READ VAPOR PRESSURES FOR EACH HALF DEGREE 0 - 110, 111 CARDS
C FORMAT(9X,F7.5,3X,F7.5). THIS DATA READ FROM TAPE.
C READ SOLAR RADIATION AT THE TOP OF THE ATMOSPHERE, 365 CARDS
C PER DEGREE OF LATITUDE. AGAIN IN THIS IS NOT 5 THEN THE SIZE
C OF QS MUST BE CHANGED.. THIS DATA ALSO READ FROM TAPE,
C FORMAT(72X,F8.1).
C READ X, DOT, BLANK, 1 CARD FORMAT(6X,3A1).
C READ MONTHLY AVERAGE DAILY WIND MILEAGE, 7 CARDS FORMAT
C (12F6.1).
C READ MONTHLY AVERAGE HOURS OF SUNSHINE, 7 CARDS FORMAT
C (12F6.1).
C READ MONTHLY AVERAGE DEWPOINT, 7 CARDS FORMAT(12F6.1).
C READ MONTHLY AVERAGE DAYLENGTH, 7 CARDS FORMAT(12F6.1).
C READ TYPE 4 CLIMATOLOGICAL CARDS.
C OUTPUT IS THE STATION NO., MONTH, YEAR, X'S AND DOTS INDICAT-
C ING GOOD AND BAD DAYS.
      DIMENSION OVWIND(7,12), OVSUN(7,12), OVDEW(7,12),
      1AVWIND(12), AVSUN(12), AVDEW(12), AVDAY(12), QS(5,365),
      1SMITTY(222),COEF(6),MONCON(12),QCOFF(12),NUM(11),
      1Y(6), V(31), KDATE(7), INFORM(80),OVDAY(7,12), Q(365)
      DIMENSION PEXBAR(7,12),COEFS(8,6),CAPAC(6),CONTNT(6),
      1IDATES(9),DELTA(6),D(3),PEMEAN(12),COF(6),ATABLE(100),
      1BTABLE(100), NUMB(10),Z(12),CNTENT(6)
      INTEGER P, DATE, BLANK, SNOW
      DATA LT,LC,LL/'T','C','L'/,NUMB/'0','1','2','3','4',
      1'5','6','7','8','9'/
      DATA KDATE/'APR','MAY','JUNE','JULY','AUG','SEPT','OCT'/
8      FORMAT(6X,5F10.5)
104      FORMAT(I3,I4,3I2,2F3.0,22X,F2.1,A1,1X,F2.1,A1)
320      FORMAT(1X,I4,1X,A4,2H19,I2,2X,31A1)

```



```

        CALL BEGIN(ATABLE,BTABLE,PEXBAR,COEFS,CAPAC,CNTENT,
1 IDATES,MONCON,SMITTY,QS,X,DOT,BLANK,OVWIND,OVSUN,OVDEW,
1 OVDAY)
1010 KNTDAT = 1
    PRECIP = 0.0
    SNOFAL = 0.0
    DO 97 I = 1,6
        CNTNT(I) = CNTENT(I)
97    CONTINUE
98    READ(4,104,END=501)ISTA,ISTB,IYR,IMO,IDAY,TMAX,TMIN,SNO,
1 SNOW, PRE, P
    KSTB = ISTB
    GO TO 93
99    READ(4,104,END=501)ISTA,ISTB,IYR,IMO,IDAY,TMAX,TMIN,SNO,
1 SNOW, PRE, P
93    IDATE = IMO*100 + IDAY
    ITEST = IDATES(1)
    IF(ITEST .GT. IDATE) GO TO 99
    IF(ISTB .NE. KSTB) GO TO 1010
    KNTDAT = 1
    DO 50 I = 1,31
        V(I) = BLANK
50    CONTINUE
    MN = 1
    CALL START(ISTB,AVWIND,OVWIND,AVSUN,OVSUN,AVDEW,OVDEW,
1 AVDAY,OVDAY,PEMEAN,PEXBAR,Q,QS)
    M = 0
    KMO = IMO
    GO TO 130
100    READ(4,104,END=501)ISTA,ISTB,IYR,IMO,IDAY,TMAX,TMIN,SNO,
1 SNOW, PRE, P
130    IDATE = IMO*100 + IDAY
    M = M + 1
    IF(IMO .NE. KMO) GO TO 302
131    IF(IMO .GE. 11) GO TO 600
101    IF(ITEST .GT. IDATE) GO TO 81
    DO 80 I = 1,6
        COEF(I) = COEFS(KNTDAT,I)
80    CONTINUE
    KNTDAT = KNTDAT + 1
    ITEST = IDATES(KNTDAT)
81    SUMDEL = 0.0
    KMO = IMO
    AMDEW = AVDEW(IMO)
    IF(P.EQ.LT.OR.P.EQ.LC.OR.P.EQ.LL)GO TO 1110
    DO 17 I = 1,10
        IF(P .EQ. NUMB(I)) GO TO 18
17    CONTINUE
        IF(P .EQ. BLANK) GO TO 1110
18    PRECIP = PRE + (I - 1)* 0.01
1110 CONTINUE

```



```
CALL EVAPOR(TMAX,TMIN,SMITTY,AMDEW,MONCON,IMO,IDAY,Q,
1AVSUN,AVDAY,AVWIND,EL)
CALL MOIST(PEMEAN,CONTNT,CAPAC,C1,C2,COEF,KNTDAT,NEW,
1ATABLE,BTABLE,PRECIP,D,EL,IMO)
PRECIP = 0.0
SNOFAL = 0.0
IF(SNOW.EQ.LT.OR.SNOW.EQ.LC.OR.SNOW.EQ.LL) GO TO 20
IF(SNOW.EQ.BLANK) GO TO 20
DO 21 I = 1,10
IF(SNOW.EQ.NUMB(I)) GO TO 22
21 CONTINUE
22 SNOFAL = SNO + (I - 1)*0.01
20 CONTINUE
IF(IMO.EQ.4.AND.TMAX.LT.45.0) GO TO 301
IF(SNOFAL.GT.0.0) GO TO 304
IF(IMO.LE.5.AND.TMAX.GT.45.0) SNOWFL = 0.0
IF(IMO.GE.6.AND.TMAX.GT.40.0) SNOWFL = 0.0
IF(SNOWFL.GT.0.0) GO TO 301
IF(CONTNT(1).GE.0.190.OR.CONTNT(2).GE.0.285) GO TO 301
V(M) = X
GO TO 100
301 V(M) = DOT
GO TO 100
304 SNOWFL = SNOFAL
GO TO 301
302 DATE = KDATE(MN)
WRITE(8,320) ISTB, DATE,IYR, V
MN = MN + 1
DO 303 I = 1,31
V(I) = BLANK
303 CONTINUE
M = 1
KMO = IMO
KSTB = ISTB
GO TO 131
600 CONTINUE
CALL WINTER(CONTNT,CAPAC,IYR,ISTB)
GO TO 99
501 CONTINUE
REWIND 4
END FILE 8
REWIND 8
STOP
END
```


8.3.2 SUBROUTINE TO READ INPUT DATA

```
      SUBROUTINE BEGIN(atable,btable,pexbars,coefs,capac,conten,  
1 idates,moncon,smitty,qs,x,dot,blank,ovwind,ovsun,ovde,  
10 vday)  
      dimension atable(100),btable(100),pexbars(7,12),coefs(8,6)  
1 ,capac(6), conten(6), idates(9),moncon(12),smitty(222),  
1 qs(5,365),ovwind(7,12),ovsun(7,12),ovde(7,12),ovday  
1 (7,12)  
2      format(6f5.2,9i4)  
3      format(12x,12f4.2)  
4      format(1x,6f10.2)  
9      format(6x,10f5.2)  
12     format(9x,f7.5,3x,f7.5)  
14     format(72x,f8.1)  
16     format(12f6.1)  
91     format(6x,1a1,a1,a1,)  
107    format(12i4)  
      read(5,9) atable, btable  
      do 45 i = 1,7  
      read(5,3) (pexbars(i,j), j=1,12)  
45     continue  
      do 13 i = 1,8  
      read(5,2) (coefs(i,j) , j = 1,6 )  
13     continue  
      read(5,2) capac  
      read(5,2) conten, idates  
      read(5,107) (moncon(i) , i= 1,12)  
      read(3,12) (smitty(i) ,i=1,222 )  
      do 19 i = 1, 5  
      do 30 j = 1,365  
      read(3,14) qs(i,j)  
30     continue  
19     continue  
      rewind 3  
      read(5,91) x, dot, blank  
      do 20 i = 1,7  
      read(5,16) (ovwind(i,j), j=1,12)  
20     continue  
      write(6,4) ovwind(7,12)  
      do 21 i = 1,7  
      read(5,16) (ovsun(i,j), j=1,12)  
21     continue  
      write(6,4) ovsun(7,12)  
      do 22 i = 1,7  
      read(5,16) (ovde(i,j), j=1,12)  
22     continue  
      write(6,4) ovde(7,12)  
      do 23 i = 1,7  
      read(5,16) (ovday(i,j), j=1,12 )  
23     continue  
      write(6,4) ovday(7,12)  
      return  
      end
```


8.3.3 SUBROUTINE TO SET INITIAL CONDITIONS

```
SUBROUTINE START(ISTB,AVWIND,OVWIND,AVSUN,OVSUN,AVDEW,  
1OVDEW,AVDAY,OVDAY,PEMEAN,PEXBAR,Q,QS)  
  DIMENSION AVWIND(12),OVWIND(7,12),AVSUN(12),OVSUN(7,12),  
1AVDEW(12),OVDEW(7,12),AVDAY(12),OVDAY(7,12),PEMEAN(12),  
1PEXBAR(7,12),Q(365), QS(5,365)  
  IF(ISTB .EQ. 4480 ) I = 1  
  IF(ISTB.EQ.3880.OR.ISTB.EQ.3890) I=2  
  IF(ISTB.EQ.1080.OR.ISTB.EQ.1085.OR.ISTB.EQ.1100) I =3  
  IF(ISTB .EQ. 2195 .OR. ISTB.EQ. 2200) I = 4  
  IF(ISTB .EQ. 2205 .OR. ISTB .EQ. 2208) I = 4  
  IF(ISTB .EQ. 5168 .OR. ISTB .EQ. 1820) I = 4  
  IF(ISTB .EQ. 6800 ) I = 5  
  IF(ISTB .EQ. 2520 ) I = 6  
  IF(ISTB .EQ. 0560 ) I = 7  
  DO 41 J = 1,12  
    AVWIND(J) = OVWIND(I,J)  
41  CONTINUE  
  DO 42 J = 1,12  
    AVSUN(J) = OVSUN(I,J)  
42  CONTINUE  
  DO 43 J = 1, 12  
    AVDEW(J) = OVDEW(I,J)  
43  CONTINUE  
  DO 44 J = 1, 12  
    AVDAY(J) = OVDAY(I,J)  
44  CONTINUE  
  DO 46 J = 1,12  
    PEMEAN(J) = PEXBAR(I,J)  
46  CONTINUE  
  IF(ISTB.EQ.4480.OR.ISTB.EQ.3880.OR.ISTB.EQ.3890) I=1  
  IF(ISTB.EQ.1080.OR.ISTB.EQ.1085.OR. ISTB.EQ.1100) I = 2  
  IF(ISTB.EQ.2200.OR.ISTB.EQ.2195.OR.ISTB.EQ.6800) I=3  
  IF(ISTB.EQ.2205 .OR. ISTB .EQ. 2208) I = 3  
  IF(ISTB .EQ. 5168 .OR. ISTB .EQ. 1820) I = 3  
  IF(ISTB .EQ. 0560 ) I = 4  
  IF(ISTB .EQ. 2520 ) I = 5  
  DO 40 J = 1,365  
    Q(J) = QS(I,J)  
40  CONTINUE  
  RETURN  
  END
```


[illegible]

8.3.4 SUBROUTINE TO FIND SOIL MOISTURE

```

SUBROUTINE MOIST(PEMEAN,CONTNT,CAPAC,C1,C2,COEF,KNTDAT,
1NEW,ATABLE,BTABLE,PRECIP,D,EL,IMO )
  DIMENSION Y(6),COF(6),DELTA(6),PEMEAN(12),CONTNT(6),
1CAPAC(6),COEF(6),ATABLE(100),BTABLE(100),D(3)
  PE = EL * .0034
  RUNOFF = 0.0
  DO 15 I = 1,6
  Y(I) = 0.0
15  CONTINUE
  PEDIF = PE - PEMEAN(IMO)
  AYE = 0.0
  DO 110 I = 1,6
  DEL = CONTNT(I)/CAPAC(I)
  W = 7.81 - 0.11*DEL*100.
  IF(W .GT. 0.) GO TO 162
  W = 0.0
162  COF(I) = COEF(I)
  IF(I .LE. 3) GO TO 98
  DO 96 J = 2,I
  K = J - 1
  COF(I) = COF(I) + COF(I)*COF(K)*(1.0 - CONTNT(K)/CAPAC
1(K))
96  CONTINUE
98  IT = DEL*100.
  IF(IT .GT. 0) GO TO 102
  WORK = 0.
  W = 0.
  GO TO 108
102  IF(KNTDAT .GT. 7) GO TO 106
  WORK = ATABLE(IT)
  GO TO 108
  106 WORK = BTABLE(IT)
C FIND ACTUAL EVAPOTRANSPIRATION
108  IT = (COF(I)*DEL*WORK*PE*EXP(-W*PEDIF)+ .005)*100.
  DEL = IT
  DEL = DEL*.01
  IF(DEL .LE. CONTNT(I))GO TO 109
  DEL = CONTNT(I)
109  DELTA(I) = DEL
110  CONTINUE
  IF(PRECIP .EQ. 0.) GO TO 220
  IF(PRECIP .GT. 1.0 ) GO TO 128
  AYE = PRECIP
  GO TO 140
C DETERMINE INFILTRATION
128  OGER = ALOG(PRECIP)
  AYE = 0.9177+ 1.811*OGER - 0.0097*OGER*CONTNT(1)/CAPAC(1)
  IT = (AYE + .005)*100.
  AYE = IT

```



```
      AYE = AYE*.01
      RUNOFF = PRECIP - AYE
      IF(RUNOFF .GE. 0.) GO TO 150
140   RUNOFF = 0.
C DETERMINE MOISTURE DEFICIENCY
150   DO 180 I = 1,6
      DEFCIT = CAPAC(I) - CONTNT(I) + DELTA(I)
      IF(AYE .GT. DEFCIT) GO TO 170
      Y(I) = AYE
      AYE = 0.
      GO TO 220
170   Y(I) = DEFCIT
      AYE = AYE - DEFCIT
180   CONTINUE
C DETERMINE CHANGE IN MOISTURE CONTENT
220   DO 230 I = 1,6
      CONTNT(I) = CONTNT(I) - DELTA(I) + Y(I)
      IF(CONTNT(I) .GE. 0.0) GO TO 230
      CONTNT(I) = 0.
230   CONTINUE
      RETURN
      END
```

8.3.5 SUBROUTINE TO FIND EVAPORATION

```
      SUBROUTINE EVAPOR(TMAX,TMIN,SMITTY,AMDEW,MONCON,IMO,
1 IDAY,Q,AVSUN,AVDAY,AVWIND,EL)
      DIMENSION SMITTY(222),MONCON(12),Q(365),AVSUN(12),
1 AVDAY(12), AVWIND(12)
1110  IF(TMAX .LT. 32.0 ) GO TO 998
      IF(TMAX*TMIN .LE. 0.) GO TO 998
      INDEX = TMAX + TMIN + 1.5
      AIR = SMITTY(INDEX)
      INDEX = 2.0 *AMDEW + 1.5
      AIR = (AIR - SMITTY(INDEX))*33.86389
      INDEX = MONCON(IMO) + IDAY
      QO = Q(INDEX)
      SUN = AVSUN(IMO)
      DAY = AVDAY(IMO)
      WIND = AVWIND(IMO)
      QSS= QO*(0.251 + 0.616*(SUN/DAY))
      EL= -53.39 +0.337*TMAX+ 0.531*(TMAX-TMIN)+ 0.010 *QO+
10.0512*QSS + 0.0977*WIND + 1.77*AIR
      IF(EL .GT. 0.0) GO TO 37
998   EL = 0.0
37    CONTINUE
      RETURN
      END
```


8.3.6 SUBROUTINE TO DETERMINE AMOUNT OF WINTER PRECIPITATION
CONSERVED

```
      SUBROUTINE WINTER(CONTNT,CAPAC,IYR,ISTB)
      INTEGER P
      DIMENSION CONTNT(6),NUMB(10),CAPAC(6),Y(6)
104  FORMAT(I3,I4,3I2,2F3.0,26X,F2.1,A1)
      DATA LT,LC,LL/'T','C','L'/,NUMB/'0','1','2','3','4',
1'5','6','7','8','9'/
      PRECIP = 0.0
601  READ(4,104,END=501) ISTA,ISTB,IYR,IMO,IDAY,TMAX,TMIN,
1PRE,P
      IDATE = IMO*100 + IDAY
      IF(P.EQ.LT.OR.P.EQ.LC.OR.P.EQ.LL) GO TO 604
      DO 602 I = 1,10
      IF(P.EQ. NUMB(I)) GO TO 603
602  CONTINUE
603  PRE = PRE + (I - 1)*0.01
604  PRECIP = PRECIP + PRE
      IF(IDATE .EQ. 331) GO TO 605
      GO TO 601
605  IF(ISTA .GE. 303 ) GO TO 612
      AYE = PRECIP*0.25
      GO TO 615
612  IF(ISTA .EQ. 307) GO TO 613
      AYE = PRECIP*0.35
      GO TO 615
613  AYE = PRECIP*0.10
615  DO 620 I = 1,6
      Y(I) = 0.0
620  CONTINUE
      DO 607 I = 1,6
      DEFCIT = CAPAC(I) - CONTNT(I)
      IF(AYE .GT. DEFCIT) GO TO 608
      Y(I) = AYE
      AYE = 0.0
      GO TO 609
608  Y(I) = DEFCIT
      AYE = AYE - DEFCIT
607  CONTINUE
609  DO 610 I = 1,6
      CONTNT(I) = CONTNT(I) + Y(I)
      IF(CONTNT(I) .GE. 0.0) GO TO 610
      CONTNT(I) = 0.0
610  CONTINUE
501  CONTINUE
      RETURN
      END
```


[illegible]

